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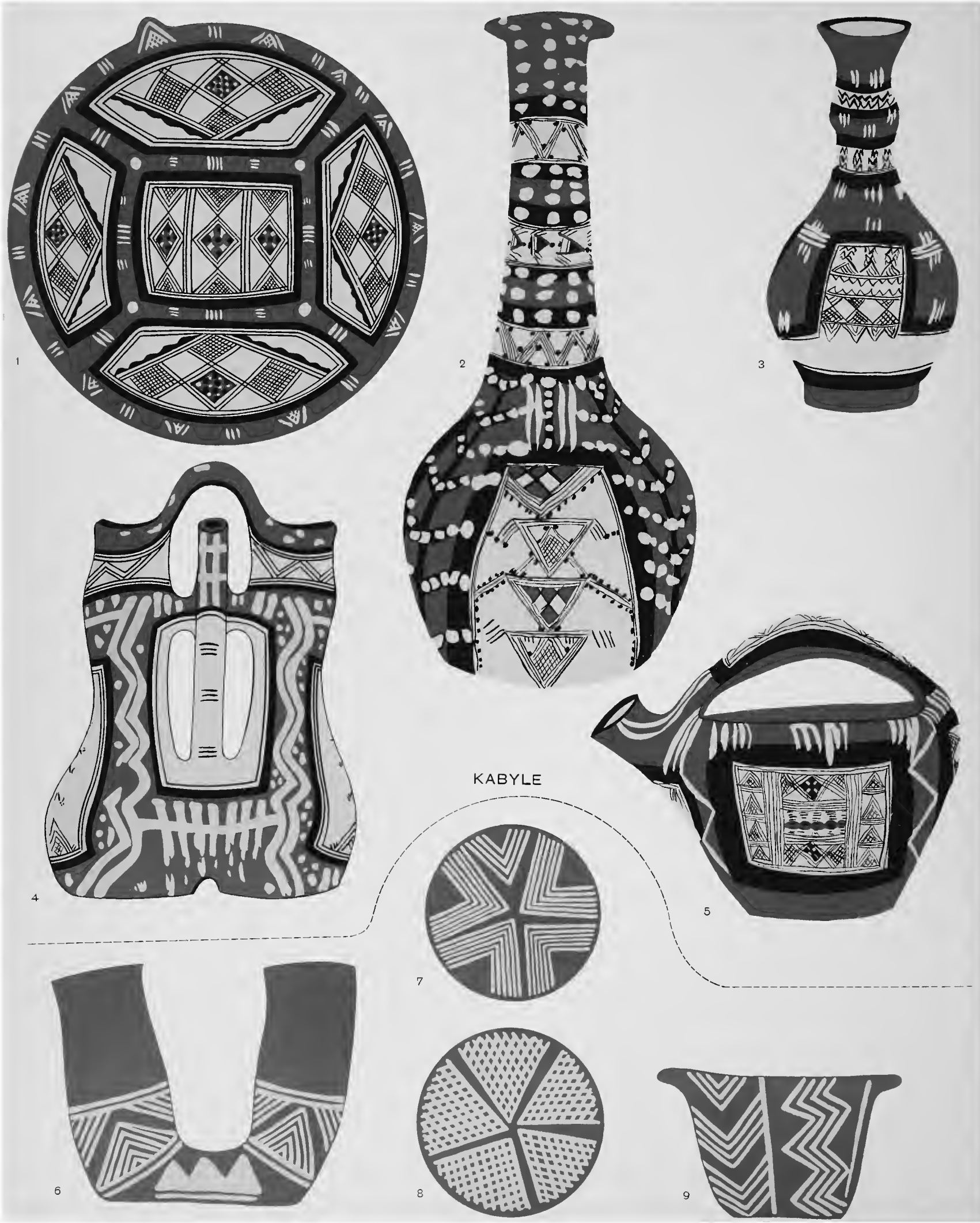
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LIBYAN NOTES



COMPARISON OF KABYLE AND PREHISTORIC EGYPTIAN POTTERY. FRONTISPIECE.



KABYLE

PREHISTORIC EGYPTIAN

Scale 1:3

LIBYAN NOTES

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PREFACE

THIS volume is the result of an expedition to Algeria undertaken in the spring of the year 1900. Our special object was to obtain such information with regard to the Berber tribes as should solve the vexed question of their early connection with Egypt. The scope of the work has, however, insensibly increased beyond what was originally intended, so that a certain amount of matter has been included which it is hoped may be of interest to the student of general Anthropology as well as to the Egyptologist.

The first place in our acknowledgments is due to Professor W. M. Flinders Petrie. It was his suggestions which originally inspired the idea of the work, and whatever value it may possess as a contribution to archaeology is due to the training acquired in working with him. In Algeria itself our obligations are many, but especial thanks are due to Mr. F. Hay Newton, H.B.M. Consul, and to Mr. F. Drummond Hay, H.B.M. Vice-Consul, at Algiers, for their kind advice and assistance. Finally, it is no less a pleasure than a duty to record that everywhere the French officials showed us the greatest courtesy and did all in their power to facilitate our enterprise.

D. R. M. I.

A. W.

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CHAPTER I

INTRODUCTORY

IF anthropology is a new science yet there have been both in modern and in ancient days many amateur anthropologists. Amongst the earliest of these may be placed various Egyptians who lived about 1300 B.C., and whose names are unfortunately unknown, though they have left published record of their theories. On the walls of the tombs of their royal masters, Seti I. and Merenptah, these untrained but not unobservant ethnologists have painted the types of the four races of mankind amongst whom the Egyptians of the nineteenth dynasty supposed the world to be partitioned. Here in the galleries of the royal necropolis of Thebes are shown the Egyptians themselves—"mankind" *par excellence*, the Asiatics, the Negroes, and the Libyans, each clearly differentiated by their peculiar dress and characteristic features.

The visitor to these tombs has from the first been struck by the curious fact that the Libyans were evidently conceived by the painters to be representatives of a race stock considerably fairer than the Egyptians. Whereas the latter are depicted in the usual red colour employed by their native artists in all periods, the Libyans on the contrary are white, with blue eyes and fair beards. The occurrence of white men of European type on a continent that is naturally thought of as inhabited mainly, if not entirely, by black races or by Semites, is a circumstance sufficiently curious to have aroused considerable interest; and since North Africa has come within the range of civilised power, observers have from time to time reiterated with no little surprise the statement that a large proportion of fair and even of blond persons is to be found among those Berber races which line the coast from Tripoli to Tangier, and extend far south into the Sáhara.

That a record of these white Libyans should have been preserved from such remote days will appear by no means singular if the geographical conditions and the history of Egypt be recalled to mind. The Libyans were a perpetual haunting terror to the Egyptians. The western border lay always open and defenceless, and even in the eleventh and twelfth dynasties campaigns were conducted by Mentuhotep I.* and by Useratesen I. against the Tahennu and the Tamahu, who threatened invasion from this quarter. In the nineteenth and twentieth dynasties the Libyan nations constituted a most serious menace to the independence of Egypt ; under Seti I., under Merenptah, and under Rameses III., it was a struggle for life and death between the empire of the Pharaohs and the barbarian confederacy which assailed it on the west.

Possibly, as there will shortly be occasion to suggest, Egypt had entertained much earlier and much closer relations with Libya than those to which reference has just been made. For the present, however, it is sufficient to recall the fact that at least from the time of the eleventh to that of the twentieth dynasty the history of the Egyptian Empire is, under one aspect, little more than the chronicle of a ceaseless struggle with this untiring and ever encroaching foe ; a struggle, moreover, in which, as may be judged from various indications, the Pharaohs and their subjects were not infrequently worsted. The power of the Libyans seems, however, to have entirely collapsed after their great repulse by Rameses III. Whether it were that the confederacy, temporary only in character like all such unions of Berber peoples, was broken up by this signal failure, or that internal dissensions kept them fully occupied at home ; it is certain that the Libyans do not after this time take any prominent place in Egyptian history. If it was a Libyan who ascended the throne in the twenty-second dynasty, it was merely as a military usurper, not as a leader of invading armies, that he did so ; his countrymen at this time and henceforward were no longer the warlike enemies but merely the hired janissaries of the effete monarchs of the New Empire.

As then the Libyans drop out of Egyptian history at about 1200 B.C., it is to Greek and Roman writers that reference must be made for such information concerning the people themselves, their distribution and their customs, as cannot be gleaned from the Egyptian records. Herodotus as usual is the most valuable authority, and his statements, derived as they are from Carthaginian and Cyrenaic sources, may no doubt be regarded as in the main trustworthy. He divides the Libyans into two great

* *I.e.* Neb-hotep.

groups, those namely who dwell between Egypt and Lake Tritonis,* and those west of the lake. Between Egypt and Lake Tritonis the Libyans are all nomads; westward of the lake, on the contrary, they are not nomads but agriculturists, and their customs differ from those of their eastern kinsmen. The nomad tribes of the coast-region are enumerated, beginning from the Egyptian side, as the Adyrmachidae, Giligammae, Asbystae, Auschisae, Kabales, Nasamones, Psylli, Garamantes, Macae, Gindanes, Lotophagi, Machlyes, and Ausees. Besides these there are the Ammonii, the Augilae, the Garamantes, and the Atarantes, who are all dwellers in the oases; and there are the Atlantes who are said to take their name from their proximity to the great mountain Atlas "which is narrow and circular on all sides and is said to be so lofty that its top cannot be seen." West of Lake Tritonis and neighbouring on the Ausees live the Maxyes, in a country that is mountainous and thickly wooded, contrasting with the low and sandy country of the nomads; these Maxyes preserve a legend that they are descended from Trojans. Next to them come the Zauēkes, and then the Gyzantes, who are great bee-keepers. These sedentary tribes west of the lake are all accustomed to paint themselves vermilion, and the Maxyes shave the left side of the head, but let the hair grow on the right.†

It is important to compare the list of names given by Herodotus with other ancient and modern names. To the Egyptians the Berber peoples with whom they came into contact were known as "Rebu" or "Lebu," "Mashuasha," "Tamahu,"‡ "Tahennu," and "Kahaka." Modern names are, in Tripoli and Tunis, "Zouaoua" and "Djebalia"; in Algeria "Chawia," "Kabyles," "Beni Mzab"; in Morocco "Chlouah," "Amazirg," "Berbers"; in the Sahara "Touâreg," "Imouchar,"§ "Sorgou," "Zenaga," and others. Of these the "Amazirg" and "Imouchar" may be pretty certainly identified with the "Mashouash" of the Egyptians and "Maxyes" of Herodotus, whilst the "Kabales" and "Zauēkes" of the latter's account suggest the modern "Kabyles" and "Chawia."

* The site of Lake Tritonis has been much discussed. Both Shaw and Rennell identify it with the Shibk-el-Loudeah, the latter further considering it to have included the Lesser Syrtis. Tissot rejects the Lesser Syrtis but finds the lake in *le bassin que l'isthme de Kabès sépare aujourd'hui de la Méditerranée*. On one point writers are generally agreed that Lake Tritonis is at least not to be looked for west of the Tunisian Shotts.

† Among the nomad tribes the Macae shaved the head on both sides and allowed the hair to grow in the middle only. On the Egyptian monuments the Libyans are commonly depicted as wearing a long side lock on the right side of the head.

‡ Tissot finds the name Tamahu in the modern Tamahak of the Sahara. He further considers the word Lebu to be derived from Liouâta, the name of a Berber tribe mentioned by Procopius as living in Tripoli and Cyrenaica, and known to have remained there till the date of the Arab invasion.

§ More correctly Amôshagh, as Barth and others write it.

To the Romans the native tribes of North Africa were known as "Numidae,"* "Gaetuli," and "Mauri." The origin of the name "Mauri" has been much discussed. The most usual theory is that it is derived from a Phoenician word (the existence as well as the form of which appear to be somewhat doubtful) akin to the modern Arabic "Moghrab" (west). But it would seem simpler to identify it with the known Hebrew form 'emōri (Amorites). Professor Sayce has already pointed out† that the Amorites were a fair-skinned, blue-eyed people like the Libyans. It is not, therefore, very audacious to suppose that the name 'emōri was originally given to both branches of what is essentially a single race, though geographically it is split into two parts by the interposition of Egypt. In comparison with Herodotus other classical authors have little information to give. Scylax has the interesting remark that the Libyans are ξανθοί, which a French writer amusingly takes to refer to skin colour, as though Homer had meant to describe a Chinaman when he spoke of ξανθὸς Μενέλαος. Diodorus Siculus supplements Herodotus in one important detail. After describing four tribes, the Nasamones, Auschisae, Marmaridae and Macae, as living in the neighbourhood of Cyrene, and of the Greater and Lesser Syrtis, he adds that these tribes live under the rule of kings and have comparatively civilised customs, but that there is another class of Libyans who are neither nomads nor agriculturists, but merely brigands. They were in fact the prototypes of the modern Touâregs. Brutally savage in their habits, dressing in goatskins, and having no habitations, but only storehouses for their booty, they were good warriors skilled in the use of spear and sling, and terrorised their neighbours, from whom they were distinguished no less by their treacherous character than by their barbarous ferocity.

Diodorus has further an extraordinary account, which cannot be left unnoticed, of a race of Amazons living on the western borders of Libya. The history of this people, who had been extinct for many centuries before he wrote, goes back he says to very ancient days, for they long preceded the Amazons who fought at Thermodon and lived many generations before the Trojan war. After subduing a considerable district in the neighbourhood of the Atlas mountains and of the lake Tritonis, they pushed on to further conquests under their queen Myrina, who made an alliance with Horus son of Isis, at that time king in Egypt. Passing through Egypt they overran Arabia, Syria,

* The term "Numidae" is generally derived from Νομάδες. "Gaetuli," according to Tissot, comes from the name of the great Berber tribe of "Gued'oula."

† See *Early Israel*, p. 71, and cf. *Races of Old Testament*.

Cilicia, and Phrygia, stopping, however, at the river Caicus. They founded the cities of Cyme, Pitana, and Priene, and then descended upon the Greek islands of Lesbos and Samothrace. Finally they were beaten back from Thrace and forced to return to Libya. This mythical connection of North Africa with Syria, Asia Minor, and the Greek islands, is highly interesting, and it may not be impossible that under the distortions of this legend is hidden the historical fact of a great movement of the western peoples. If such were the case the Amazons of Diodorus, this *ἔθνος γυναικοκρατούμενον*, might be a Berber people in the condition of organisation known as the Matriarchate.*

Sallust, who, from his position as proconsul, had unique opportunities of observation, was too little interested in the peoples that he governed to acquire any information about them. He draws professedly on "the Punic books which are called those of king Hiempsal," but succeeds in extracting very little from them. The sole point of interest in his account is the tradition which he preserves that the army which Hercules led to Spain was disbanded after his death, and that the Medes, Persians, and Armenians who composed it crossed over to Africa and settled in the coast regions, where they intermarried with the original inhabitants and eventually became merged in them.†

It was shortly after Sallust's time that the whole of North Africa definitely became part of the Roman Empire. From the date of this absorption the history of the native tribes is more than ever obscured. We know only that they were always a turbulent and dangerous element, and are enabled to infer that they preserved throughout this period much at least of their independence and of their peculiar organisation.

The Arab conquests of the seventh century reduced the country to a nominal subjection, but down to the present generation the Berbers, at any rate of Algeria, have maintained their ancient constitutions, and even now that they are thoroughly controlled by the French administration, they preserve much of their individual character intact.

It has been hinted that while the Libyans are known to have been at war with the kings of the eleventh and twelfth dynasties, yet this may have been by no means their earliest connection with Egypt. This point brings us to consider the special purpose of

* The Kanúri Berbers, of Bornu still live under the Matriarchal system—Barth, *Travels* chap. xxix. cf. chap. xiv. The actual phrase used by Diodorus would be as indefensible as the English term "Matriarchate," originating indeed from a similar misconception.

† Strabo seems to be echoing the same legend when he says: "There are some who affirm that the Mauri are Indians who landed in this country with Hercules."

the present volume. When the discoveries of Professor Flinders Petrie and Mr. J. E. Quibell, followed by those of M. de Morgan, directed attention to the prehistoric civilisation of Egypt which was then for the first time made known, there was a general tendency amongst archaeologists to connect this wholly new phase of Egyptian culture with Libya rather than to regard it as of native origin or as sprung from southern or eastern influences. Professor Maspéro had identified the huntsmen of the Louvre plaque as Libyans and expressed his belief that the graves of Nagada were to be attributed to the same race. Professor Petrie was persuaded by various coincidences of detail, and especially by the existence amongst the modern Kabyles of a red and white pottery closely resembling that which was made by his "New Race," to connect the latter with Libyans represented in our own times by the modern inhabitants of Algeria; and shortly afterwards Professor Wiedemann supported a similar view.

Gradually the opinion of Egyptologists and others has crystallised into the belief that the culture of the prehistoric Egyptians was Libyan in origin, and even that the race to which it belonged was a Libyan race. It was in the hope of acquiring such evidence as should enable the question to be solved, whether in accordance with, or in contradiction to, this current theory, that the authors in the spring of 1900 made an expedition through various parts of Algeria. The results of their study are given in the present volume, which aims at once at setting forth material which may be of interest to the general anthropologist, and at bringing this material to bear upon the special question of the origins of the prehistoric peoples of Egypt.

CHAPTER II

GENERAL REMARKS ON THE BERBERS

CHARACTER—RELIGION—DRESS—LANGUAGE

THE most casual observer cannot fail to be struck with the extraordinary difference between the Berber and the Arab. Not only are they unlike in features, in colouring and in language, in gait and in demeanour, but the characters of the two races are diametrically opposed to one another. The Berber gives the impression of being, as he is, the descendant of men who have lived in a sturdy independence, self-governing and self-reliant ; the Arab is the degenerate offspring of a race which only from its history and past records can claim any title to respect. Cringing, venal, avaricious, dishonest, the Arab combines all the faults of a vicious nature with those which a degraded religion inculcates or encourages. The Berber, on the other hand, is straightforward and honest, by no means averse to money-making, but not unscrupulous in the methods which he employs to this end, intelligent in a degree to which the ordinary Arab never approaches, and trustworthy as no Arab ever can be. A Berber chief possesses in reality the qualities which romancers attach to the Arab, genuine courtesy and hospitality, and a self-restrained and manly dignity. The dress he wears and the religion he professes are the only points in which, even externally, he resembles the descendants of the Prophet and of his race.

The Berber character.

The Berbers, as has been remarked, are Mohammedans. The Arab conquests of the seventh century, though they have left few other permanent traces upon the inhabitants of Kabylia and of the Aurès mountains, succeeded in converting the entire population to Mohammedanism ; each village has its mosque and its saint's tomb, and in many there is a Hâjji who has made the sacred pilgrimage. The martial and religious fervour of the first invaders seems to have carried everything before it. There was no ebb of the tide that swept over North Africa, it was only its encroachment

Religion.

upon Europe that was eventually driven back. That Islam should have retained its hold upon the lowland districts which were colonised and garrisoned by the invading race, is in no way remarkable ; but it is certainly somewhat curious that the mountaineers, who in other respects preserved their individuality in so marked a degree, not only accepted but remained faithful to the newly introduced religion. It suggests at least that whatever preceded it cannot have been very deeply rooted in the hearts of the people. But what was it that Islamism supplanted ? was it Christianity or some earlier cult ? It is not to be assumed without evidence, as seems often to be supposed, that the Kabyles and Chawía were ever Christians.* The historical probabilities are not much more in favour of such a view than they are opposed to it. Though Kabylia early came within the territory of a Roman province yet the Romans left it very much to itself, if we may judge from the fact that no vestige of settlements made by them is to be seen in the mountain parts of this region.† The Aurès, it is true, came into close contact with Roman power, for, owing to the turbulent character of the inhabitants, it was necessary to establish garrisons in the very heart of their country ; but even so analogy does not support the view that garrisons are effective proselytising agencies. The suggestion that the crosses tattooed by Kabyle women on their faces are a reminiscence of past Christianity, is merely puerile. In the first place though the cross is fairly common amongst the Chawía it is by no means the most ordinary tattoo mark amongst the Kabyles ; and in the second place, it is (—or it ought to be) matter of common knowledge that the cross is neither originally nor exclusively a Christian emblem. As a matter of fact it is one of the decorations of the robe of a Libyan portrayed on the Egyptian monuments. The only substantial ground for affirming it to be probable that the Berbers of the mountains were ever Christianised, is to be found in the fact that the mutual persecutions instituted by the various fanatical sections of the African church, drove many of its members into the mountains, where they may very possibly have preached their faith.

In any case it is not probable that Christianity, even if it ever obtained any footing at all in the country, gained any considerable hold upon the people. It is possible, however, that it influenced them just so far as to shake preceding beliefs, and that it thus left half-hearted converts who would oppose no strong prejudices to the creed of Islam.

* It is clear from Procopius, *Hist. Vand.* bk. i., that at least the Berbers of Tripoli were never Christianised. He makes frequent mention of the Aurasii Mauri (*i.e.* Chawía) without the slightest suggestion of their being Christians.

† We do not include in this statement great lowland valleys like that of the Sebaou.



A KAÏD IN FULL DRESS.



A CHAWÏA WOMAN IN FULL DRESS.

What was the religion of the ancient Libyans it is not easy to say. The Nasamones, according to Herodotus, were given up to ancestor-worship; the Machlyes celebrated a yearly festival to a goddess whom he identifies with Athena, and who was said to be daughter of "Poseidon" and of Lake Tritonis. Those who lived in the neighbourhood of the lake again sacrificed chiefly to "Athena," and next to her venerated "Triton" and "Poseidon." The nomad Libyans sacrificed only to the sun and moon, which were, says Herodotus, universally worshipped by all the Libyans.* Diodorus gives an account of the religion of the Atlantioi which is too much vitiated by analogies and identifications with Greek divinities to be very valuable. Ouranos, Helios, Selene, and Dionysus figure prominently in his mythology; from which and from other indications it seems probable that some not very advanced form of nature worship, in which the heavenly bodies found a chief place, was the native religion of these tribes.

The dress worn by the Kabyles and Chawía (the two Berber races with whom this Dress. volume deals) is identical with that of the Arabs of Algeria. The ordinary costume of the men is a cotton or woollen under-garment, over which are thrown several thicknesses of what are really neither more nor less than woollen blankets, though when they are sewn together at the sides, and have a capucin hood attached, they are dignified by the name of burnouses. The dress of a rich man is of course more elaborate, though of the same style. A Kaïd of the Chawía in his full gala dress is shown in our Plate I. His exterior garment was a red burnous with a green fringe at the neck; then came a white burnous with capucin hood and a muslin-gauze scarf (*haïk*); after this a loose white tunic with slate edgings (*gandara*); then a blue-sleeved waistcoat trimmed with black (*makyas*) and two lavender waistcoats (*labedâa*) edged with embroidery of a yellow-white tint. A girdle (*lahizaam*) of a sort of plaid pattern, a turban (*shash-tabâni*) about his head, and a rosary round his neck, completed the costume. On his feet he wore boots of red leather, besides a pair of large black shoes.†

The bright-coloured outer burnous worn with the full dress gives a very picturesque effect; it is commonly red, sometimes claret-coloured or lavender.

* Cf. Leo Africanus, bk. i. "The ancient Africans were much addicted to idolatry, even as certain of the Persians are at this day, some of whom worship the sun and others the fire for their gods. . . . Those Africans which inhabited Libya and Numidia would each of them worship some certaine planet, unto whom likewise they offered sacrifices and praïers" (Pory's version). Leo is very trustworthy, but it may be doubted whether, writing as he did early in the sixteenth century, he possessed any more information than is now available.

† Several kinds of shoes are in use. The common people wear sandals with soles of plaited grass.

The ordinary dress of the women is simple in the extreme—a single tunic of coarse material and dingy colour tied up at the waist with a girdle and with holes for the arms to pass through. Poor as their clothes are, however, these women at all times wear a profusion of silver. Heavy bracelets on the wrists, a necklace with innumerable little trinkets attached, large breast-pins of a design recalling similar Celtic ornaments, wide bands of silver on the ankles, and a miniature cuirass of silver and coral at the throat ; such are the ordinary wear of the humblest drudges in the fields. On festive occasions a finer garment is put on, a handsome head-dress, and still more silver work (see Plate I.).

The women wear all the amulets common amongst the Arab Mohammedans. It was difficult to discover whether they had any others not imported by the latter. One, however, a porcupine's foot set in silver, worn by women as a charm during pregnancy, does not, so far as our knowledge goes, correspond to any Arab type.

Language.

The Berber language has proved singularly intractable to the philologists. Up to the present none of them seem to have improved upon the verdict of Professor Francis Newman, who declared as long ago as 1836 that "the original material of the Berber language is not Shemitic," though remarking that in structure there were many points of resemblance to the "Shemitic" type. This eminent philologist further suggested the possibility that the two languages were derived from a common source and even considered that in some cases the Berber had preserved the older form. Again, of the vocabulary he says: "Although a certain number of the native roots have a more or less distinct relation to Arabic, Hebrew, or perhaps the Ethiopian languages, there is no question that the great mass of the words is thoroughly peculiar." *

M. Olivier, writing in the *Bulletin de l'Académie d'Hippone* (No. 5) has attempted to show an affinity between Berber and Indo-European roots. But his examples are far from being convincing, and linguistic science has now advanced beyond the stage of supposing that more or less doubtful resemblances of vocabulary are sufficient to establish relationship between languages of which the structural forms are not identical. The best verdict on such attempts is expressed in Voltaire's saying, which M. Olivier himself quotes, to the effect that the word "Ionian" can be derived from "Japet" by merely changing the "Ja" into "Io" and the "Pet" into "Nian."

With regard to the question of structural similarities between Berber and Semitic

* Cf. E. Renan, who speaks of Berber as "une langue à part, profondément distincte des langues sémitiques."—*Revue des Deux Mondes*, for September 1, 1873.

it does not seem, on looking through a Berber dictionary, as if the tri-consonantal root characteristic of Arabic and other Semitic languages was invariably to be traced in Berber. It is not that the roots are too short, which might be explained by the dropping out of a weak consonant, but that they are too long, possessing too many consonants. At the same time it must be allowed that this may be a delusive appearance due to imperfect analysis of the variations of derivative stems—the prefixing of the *s* to form a factitive stem is apt to mislead in this way—but the following examples are difficult to explain as tri-consonantal roots :—

<i>Selgloudh</i>	to stammer		<i>Zemlil</i>	to force
<i>Rejdel</i>	to be lame		<i>Selbedhech</i>	to twitter
<i>Qelougel</i>	to shake		<i>Semejeguer</i>	to grimace *
<i>Endjer</i>	to carpenter			

It must, however, be conceded that if a certain number of verbs seem rebellious to the tri-consonantal scheme, yet undoubtedly very many conform to it. There is further a large number upon which it is difficult to pronounce with certainty in this respect, owing to the fact that transliterations from the oral language cannot be implicitly trusted to give the correct consonantal values ; and the Berber dialects have never been used for literary purposes.

A few elementary remarks † on the grammar may be of interest.

In true Berber words there is no article ; the prefixing of *el* or the variations of *el* is an invariable sign that the word is borrowed from Arabic. It should be noticed, however, that all feminine substantives begin with *th* and end with *th* or *t*. Masculine substantives commonly begin with *a* or *i*.

There are two genders only, masculine and feminine. Plurals of the regular class are formed as follows :—

In masculine substantives the initial *a* is changed into *i* and the termination *en* is added, thus—

<i>Aqchich</i> , child,	plur. <i>Iqchichen</i>
<i>Adhar</i> , foot,	plur. <i>Idharen</i>

Similarly the plural of feminine nouns is formed by changing the *a* which follows the initial *th* into *i*, and by changing the final *th* into *in*.

Examples—*thakthabth* (book), *thikthabin* ‡
thafounasth (cow), *thifounasin*

* From the *Dictionnaire Français-Kabyle* of Père Olivier.

† Based on *Une Première Année de Langue Kabyle*, par Si. A. Said.

‡ Evidently a Kabylied form of the Arabic word *Kitab*.

The same rules hold for masculine and feminine adjectives.

Personal pronouns may be divided into two classes—

(a) Those which are attached as suffixes to nouns, prepositions, and verbs ;

(b) Those which stand isolated as subjects of verbs. Under (a) fall—

1st pers. sing. masc. and fem.	<i>iou</i> "of me"	<i>akkkham-iou</i> (my house)
2nd pers. masc.	<i>ik</i> "of thee"	<i>thikthabin-ik</i> (thy books)
2nd pers. fem.	<i>im</i> "of thee"	<i>laqlam-im</i> (thy pen)
3rd pers. masc. and fem.	<i>is</i> "of him" "of her"	<i>ikhef-is</i> (his, her, head)

The plural forms of these are—

1st masc.	<i>ennar</i> }	2nd fem.	{ <i>ennouent</i>
1st fem.	<i>entar</i> }		{ <i>enkount</i>
2nd masc.	<i>ennouen</i>	3rd masc.	<i>ensen</i> }
		3rd fem.	<i>ensent</i> }

N.B.—When attached to prepositions these undergo slight variations. Examples :—*Rour-i*, "I have," and *oulach-rouri*, "I have not," but *Rour-sen* and *Rour-sent* (dropping the first syllable of the pronoun) for "they have."

Further, there are some supplementary and modified forms used when these pronouns are attached as direct or indirect objects of verbs, thus :—

When used as direct objects the pronouns are—

1st sing.	<i>ii</i>	1st plur.	<i>ar</i>
2nd sing. masc.	<i>ik</i> }	2nd plur. masc.	<i>ikoun</i> }
2nd sing. fem.	<i>ikem</i> }	2nd plur. fem.	<i>ikount</i> }
3rd sing. masc.	<i>ith</i> }	3rd plur. masc.	<i>ithen</i> }
3rd sing. fem.	<i>its</i> }	3rd plur. fem.	<i>ithent</i> }

Example—*Tououeth-ith*, "he struck him."

When used as indirect objects of verbs the pronouns are—

1st sing.	<i>ii</i>	1st plur.	<i>ar</i>
2nd sing. masc.	<i>ak</i> }	2nd plur. masc.	<i>aouen</i> }
2nd sing. fem.	<i>am</i> }	2nd plur. fem.	<i>aouent</i> }
3rd sing.	<i>as</i>	3rd plur. masc.	<i>asen</i> }
		3rd plur. fem.	<i>asent</i> }

Example—*Izenz-asen*, "He sold to you men."

Under class (b) of the personal pronouns come—

<i>Nek</i> or <i>Nekini</i>	I	<i>Noukni</i>	we
<i>Ketch</i> or <i>Ketchini</i>	thou	<i>Kounoui</i>	you
<i>Kem</i> or <i>Kemini</i>	thou (fem.)	<i>Kounemthi</i>	you (fem.)
<i>Netsa</i>	he	<i>Nouthni</i>	they
<i>Netsath</i>	she	<i>Nouthenti</i>	they (fem.)

Modern Berber, like modern Arabic, has only two tenses in use, a Past and a Future.

The prefixes and suffixes of the past tense are—

1st sing.	—	<i>er</i>	1st plur.	<i>n</i>	—
2nd sing.	<i>th</i>	<i>edh</i>	2nd plur. masc.	<i>th</i>	<i>em</i>
3rd sing. masc.	<i>i</i>	—	2nd plur. fem.	<i>th</i>	<i>emth</i>
3rd sing. fem.	<i>th</i>	—	3rd plur. masc.	—	<i>en</i>
			3rd plur. fem.	—	<i>ent</i>

Thus the past tense of the verb *Hououes*, to walk, is declined as follows :—

<i>Hououes-er</i>	I walked	<i>N-Hououes</i>	we walked
<i>Th-Houous-edh</i>	thou walkedst	<i>Th-Houous-em</i>	you walked
<i>I-Hououes</i>	he walked	<i>Th-Houous-emth</i>	you (fem.) walked
<i>Th-Hououes</i>	she walked	<i>Houous-en</i>	they walked
		<i>Houous-ent</i>	they (fem.) walked

The future tense is formed (quite differently from the Arabic) by prefixing the syllable *Ad* to all the persons of the past tense. The letter *d* of this prefix contracts with the prefixes of the 2nd and 3rd (fem.) persons sing. and of the 1st and 2nd persons plural. Thus the future of the same verb *Hououes* is declined as follows :—

<i>Ad-Hououes-er</i>	I shall walk	<i>Ann-Hououes</i>	we shall walk
<i>Ats-Houous-edh</i>	thou wilt walk	<i>Ats-Houous-em</i>	you will walk
<i>Ad-i-Hououes</i>	he will walk	<i>Ats-Houous-emth</i>	you (fem.) will walk
<i>Ats-Hououes</i>	she will walk	<i>Ad-Houous-en</i>	they will walk
		<i>Ad-Houous-ent</i>	they (fem.) will walk

Note.—*H* is the Arabic ح, *D* is the Arabic د.

The passives of verbs are formed by prefixing *tsou* or *tsoua* to the root, as—

<i>Kemmel</i>	to finish,	<i>Tsou-kemmel</i>	to be finished
<i>Effer</i>	to hide,	<i>Tsouaffer</i>	to be hidden

Factitives are formed by prefixing *s* to the root, as—

<i>Ers</i>	to descend,	<i>S-ers</i>	to make to descend
<i>Ekker</i>	to rise,	<i>S-ekker</i>	to make to rise

Reciprocals are formed by prefixing *m* or *mi* to the root, as—

<i>Zer</i>	to see,	<i>M-Zer</i>	to see one another.
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Very peculiar and characteristic of the language is the use of a frequentative (*forme d'habitude*), employed to express all continuous, repeated, or present action. The frequentative is formed by a modification of the root which may be of several kinds; the commonest forms are the addition of *Ts* or *Th* to the stem; as *Arou*, to write, of which the frequentative is *Ts-Arou*; and the doubling of the central consonant of the root, as in—

<i>Emger</i>	to reap,	Frequentative	<i>Megger</i>
<i>Ekhdem</i>	to work,	Frequentative	<i>Kheddem</i>

Berber is spoken in its full vigour in Kabylia and is the native language of the Aurès, but Arabic is so commonly used for many purposes that it is clearly supplanting Berber amongst the Chawía. Often we found it quite difficult to get the genuine Chawía word for an object, it was the Arabic word which came first to the lips. Even in Kabylia the language is terribly vitiated by the introduction of foreign words—French, Italian, Spanish, and above all, Arabic. Possibly the future language of Algeria is destined to be some very evil-sounding compound of three or four European languages with an admixture of Berber words, the whole being superimposed upon a half-understood Arabic grammar.

For the moment, however, the conditions are not unfavourable for the study of the Berber dialects. Missionaries and teachers are writing grammars and dictionaries which provide the student with a large amount of material not hitherto available.

CHAPTER III

THE POLITICAL AND SOCIAL ORGANISATION OF A BERBER PEOPLE

THE organisation of Berber society exhibits in a perfect and highly developed form the type of the village community. Wherever foreign influences have not intruded the same essential features are reproduced. An inborn love of independence, an instinct of the value of individuals joined to the conviction that individuals prosper only when united by bonds of sympathy and mutual assistance, have originated an infinite number of small democratic communities in which the will of the people is the sole governing authority ; and the small number of officials and administrators whom it is necessary to invest with executive powers, are in reality, and not merely in name, the instruments of the people's will. The development and details of this municipal life which is characteristic of all the Berber races,* may be studied most readily as it existed among the Kabyles, who preserved it intact down to the time of the French conquest, and who still govern themselves in accordance with their time-honoured institutions save only for such modifications as the sovereignty of an European power renders indispensable.

General nature of the society.

The account that is given in this chapter of the social and political organisation of the Kabyles is entirely based upon the admirable work of General Hanoteau and M. Letourneux,† whose experience as administrators gives a value to their treatise which the observations of passing travellers cannot hope to rival.

The Village is the administrative unit amongst the Kabyles. Every little *Thaddart*, composed only of some few hundred inhabitants, is a veritable republic in itself hardly less independent than San Marino, making its own laws, naming its own heads, and

* The Touâregs are an exception. They live under a monarchical régime, which alone would suffice, as H. and L. remark, to show that they are not living the normal Berber life. They have been forced by the peculiar circumstances of their existence to adopt a form of government alien to their natural inclination.

† *La Kabylie et les Coutumes Kabyles*, Paris (Challamel), 1893, in 3 vols. It is a mine of information which especially no student of Sociology and Comparative Law can afford to neglect.

carrying on its own government. Two or more villages are usually connected by administrative ties* to form a tribe (*Ārsh*), and the union of several such tribes constitutes a Confederation (*Thakebilt*). Except in very exceptional cases, such as invasion by a foreign power or a great war of aggression, no more comprehensive confederation than this is ever formed.†

The Tribe.

The *Tribe* (*Ārsh*) does not ordinarily interfere in the local government of its villages, to which the most complete autonomy is allowed. It has, however, certain of the duties of a central administration to perform, the most important of which are the determination of questions of peace and war, the making of roads, and the management of such tribe-property as markets, mosques, tombs of saints, and educational establishments, with the levying of the taxes necessary for these purposes. Further, the tribe acts as arbiter in disputes between villages and as ultimate referee in regard to questions which the inhabitants of any of its villages fail to decide amongst themselves.

A general assembly of the tribe is practically unknown. Except in cases of such extraordinary importance (*e.g.* a holy war against the infidel) as to demand the presence of the entire people, the affairs of the tribe are managed by a deputation of the chief men from each of the various villages which compose it. These delegates do not hold a permanent office, so that there is no danger of the development of oligarchies; and there is no limit other than convenience to the number of delegates which a village may send, for it is a striking characteristic of the Kabyles that democratic as they are they never decide questions by the tyranny of mere majorities.

The Confederation.

The *Confederation* (*Thakebilt*),‡ is a union of tribes on a principle analogous to that which determines the union of villages. In the *Thakebilt* the tribes occupy the position which in the *Ārsh* was held by the villages, but the bond is looser in this than it was in the lower federative grade. The Confederation never interferes in the affairs of its tribes unless it is directly appealed to, or unless the most vital interests imperatively demand that it should do so.

In time of war only, a head is appointed for each of the tribes and for the Confederation. These are called respectively the *Amin-el-Ārsh* and the *Amin-en-Thakebilt*.

* Not common ancestry either real or reputed. The Kabyle tribe is not based on kinship.

† We may perhaps conceive of the Libyan invasions of Egypt in the nineteenth and twentieth dynasties as having been undertaken by a vast union of the various confederations such as even now a sacred war would evoke.

‡ It is possibly significant that whereas the word for village (*Thaddart*) is Berber, the words for tribe and Confederation (*Ārsh*) (*Thakebilt*) are Arabic.

Before dealing with the constitution of the *Thaddart* it is necessary to refer to an organisation which disturbs the self-centred isolation of the village and brings it into contact with its neighbours. This is the *Sof*, a term which may be rendered "Fraternity." It is a league of individuals who covenant to render mutual aid to one another in all cases of necessity. "Assist your own in right or in wrong" is the native adage which has been adopted by such associations. Every village is divided into two opposed Sofs, and as these are seldom equally matched in respect of numbers or of strength it is common for them to ally themselves with similar Fraternities in neighbouring villages, until the league may have ramifications extending through entire districts and may even embrace tribes which are not included within the same Confederation. Gradually, however, the various tribes have tended to form groups, and it is only those which are included within a group of this kind that enter into reciprocal relations with one another.

Within the walls of the village the members of a *Sof* are united by the closest of bonds. The honour and advantage of the Sof rank paramount above all personal interests; and even those ties of kinship which knit the members of a Kabyle family so firmly to one another, are violated if the claims of the Fraternity demand such sacrifice. If a man has a quarrel with another and the Sof decides to espouse his cause, he may feel safe alike from the vengeance of individuals and from the justice of the law; his fellow-members will support him with every resource from perjury to murder. Yet, devoted as he is to his fraternity so long as he remains a member of it, the Kabyle thinks little of transferring his allegiance. His adherence is dictated purely by self-interest, and once convinced that his Sof is no longer affording him the advantages which he expected from it, he will at once desert it in favour of another.

With the extension of its range beyond the village the cohesion of the Fraternity is to some extent weakened. Members of a Sof will, for instance, send armed contingents to support their fellow-members of another village in time of civil war, but unless the quarrel has a more than merely local interest they will expect to be paid at a suitable money-rate for their assistance. On the other hand, there is no limit to the liberality which fellow-members display in matters other than the bearing of arms. They will freely supply money and provisions to their partisans in another village, and should the fortune of war drive the latter from their homes, they will of their own accord turn out in festal procession to bid them welcome, and will receive them with cordial and unstinting hospitality.

The funds of the Sof are supported by subscriptions which it raises from its members, and the administration of them is entrusted to the heads of the organisation, who are not even expected to give account of sums disbursed on secret services, but only of such payments as can be fearlessly admitted and discussed without reserve. The heads of the Sof are called *Irfaouen-n-es-Sof*.* They are naturally persons of great importance, generally members of powerful families, and always men of sufficient private wealth to be able to meet the various calls which may be made upon them and to subscribe largely to the funds of the Fraternity.

THE VILLAGE

The Djemâa. *The Djemâa*.—The keystone of the village polity is the Djemâa, the general assembly of the citizens, of which every adult man is a member. Its sittings are held once a week in the open air in a place reserved for the purpose. In rainy weather or great heat it assembles either in the mosque or in a roofed passage furnished with stone benches (Plate VII. 2) to which also the name Djemâa is given. The president is the Amin, who, after the reading of the preliminary text of the Korân, declares the meeting opened, explains the purpose for which it has been summoned, and invites the opinion of the members. Theoretically any member may speak, but in practice it is only the old men and the heads of families, the *temman*, and such others as are especially influential and respected, that exercise the right. It is this inner committee of the assembly which forms the effective government of the village.

The assembly remains seated throughout and the orators speak without rising from their places. Debates are orderly and quiet; when they are concluded the first verse of the Korân is again read and the Amin dismisses the meeting. Decisions are never taken by a majority of votes; and for matters of importance unanimity is required. In accordance with Kabyle custom the feeblest minority is respected; and an additional reason for this practice is supplied by the remembrance that the dissentients, though few in number, may have the support of a powerful Sof. If the assembly fails to arrive at an agreement the discussion is adjourned, to be revived at a later date, often to be ultimately abandoned. If it is necessary to arrive at a prompt decision reference may be made to the chief men of the tribe,

* Note that the word *Sof* is also Arabic, not Berber.

to the Djemâa of another village, or to some individual arbiter belonging to their own or another village in whom both sides repose confidence.* From the decision of such referees there is no appeal.

The powers of the Djemâa extend over every matter great or small which concerns the welfare of the village. It has the right to interfere even in the minutest details of private life. The exercise of judicial authority both in civil and in criminal cases belongs to the Djemâa;† and it is this body which makes and repeals laws, which decides on questions of peace and war, levies taxes and administers the public property. Nothing escapes its control; its functions are as various as the needs of the community.

The *Amin*,‡ who is called in some parts the *Amekkeran*§ (chief) or the *The Amin*, *Amrâr*§ (old man), is the executive head deputed by the Djemâa to carry out its decisions and to superintend the details of government. In principle any man may be Amin of his own village, but practical necessities have curtailed the right, so that the Amin is always chosen from one of the influential families and is one who can rely upon a *Sof* strong enough to uphold his authority; he must further possess sufficient private wealth to adequately support his position. He is not elected by popular suffrage, but is chosen by the influential persons of the village in consultation with the heads of families. These submit their choice to the Djemâa, which, as its guiding members are the same as those who have already expressed their approval by agreeing to the nomination, commonly ratifies the appointment, though it sometimes exercises its right of rejection. In such an eventuality recourse is had to arbitration, as in the other cases described where the Djemâa failed to agree upon any matter of importance.

The Amin is properly speaking simply the agent of the popular assembly. He has no independence and no initiative, except in small matters relating to the maintenance of order. Apart from these he can take no action without the consent of the Djemâa. At the weekly sittings he acts as president, and this is one of his most important duties. Between the recurrence of the sittings he is occupied with preparing the subjects which are to be brought forward for discussion, receiving reports, hearing

* Leo Africanus has a delightful account of how he was detained for a week to act as judge in a Berber village, and at the end received nothing but large presents in kind; which, being awkward to carry, he left to his host as a reward for his entertainment.

† Under French rule the administration of penal law has been taken away from the Djemâa.

‡ Arabic word.

§ Berber words.

complaints, and holding inquiries. He is steward to the Assembly for the administration of public property ; and if buildings or repairs are required it is he who conducts the preliminary investigations, and having formed his opinion brings a report before the Assembly, when he receives its authority for expending the necessary sums and for requisitioning whatever amount of free labour is required. The management of the whole public finance, with the exception of the revenues of the mosque, is in his hands ; and he is responsible for the organisation of that communal hospitality which is so characteristic a feature in Kabyle life.

As the Amin constitutes the sole executive of the village state his duties are hardly less multifarious or comprehensive than those of the Djemâa itself.* A good Amin merits the title that he is often given of "shepherd of the village."

The Tamen.

The *Temman*† (singular *Tamen*) are the lieutenants of the Amin whom he appoints to supervise the different quarters of the village. The Tamen is responsible for giving information to the Amin of all that passes in the district over which he is placed. He has no power of his own, and may not inflict punishments ; he is merely the eye of the Amin.

The Tamen, though he has no direct powers, is a person of importance. As the middleman between the Amin and the Kharouba (or quarter of the village) he is greatly respected. He has the duty of levying certain of the taxes within his Kharouba ; and in general he performs the countless little good offices which in our own country are discharged by the county-court judge or magistrate of the peace, and which enable the machinery of government to work without friction by the judicious smoothing away of petty obstacles.

Organisation of religion.

So far we have dealt it may be said with the "State" ; we have now to deal with the "Church" in the village community. Each village possesses one or more mosques, which are generally unpretentious buildings resembling enlarged houses (see Plate IX. 5). They are sometimes, but by no means always, adorned with a minaret. The mosque generally possesses a certain amount of private property, which is administered by the Djemâa through the medium of a special officer, who is called the *Oukil* of the mosque. He is always a person of some wealth and consideration, but he is strictly the servant of the Djemâa and has no initiative of his own.

* Under French rule the position of the Amin has lost something of its importance. His tenure of office is now confined to a year ; and, at any rate in some cases that we observed, he appeared to be subordinated to a Kaïd, who was not originally a member of the village, but appointed by the French Government in its own interest.

† Arab word.

The *Imâm*, or village marabout, is responsible for the religious life of the community. He gives the morning and evening call to prayer, recites the daily offices, and presides over all religious functions. It is he too who instructs the young ; and if there are enough children of marabouts in the village to make it worth while, he is placed at the head of a regular school of primary instruction. The *Imâm* is ordinarily appointed by the *Djemâa*, which he further serves as secretary ; but if the village contains many marabouts he is often appointed by them, and there are even cases in which his office has become hereditary. The *Imâm* is paid a salary by the village, and claims also to receive presents in kind (wheat, figs, oil, etc.) from all who can afford to give them.

The *Marabouts* do not form an essential part of the village life. There are some Marabouts. villages which contain only one or two isolated families, others (termed *Zaouïa*) which are inhabited solely by marabouts. Their name is derived from the Arabic word which means to “bind,” “tie.” Theoretically therefore they are those who are “bound” to a religious life.* The dignity of marabout being hereditary, there has grown up a regular religious caste which lives a distinct and peculiar life in the midst of the Kabyle communities. The members of the caste enjoy peculiar privileges ; they are usually exempt from the duty of bearing arms or of contributing to the chief taxes. They are treated with great respect, are consulted in all important affairs, and referred to as arbitrators not only in the petty differences between family and family, but even in those serious quarrels which would lead to inter-tribal war. They have a monopoly of the education of the young, though there are many amongst them who are wholly illiterate.† No man who was not born a marabout can become one in his own lifetime ; but a man of learning and piety may be canonised after his death, and his children will then be marabouts. The members of this religious caste assert that they are of foreign origin, but it is evident that this claim is made only in order to establish a fictitious superiority over the native Kabyles. For a devout Mohammedan it is of course an advantage if he can represent himself as allied by blood to the kin of the prophet. Hanoteau and Letourneux examined the genealogies of various marabout families ; with the result that while one was found to be descended from an Arab dervish, another was descended from a Turk, a third and fourth from a negro slave, and several from full-blooded Kabyles.

* The whole institution of marabouts is clearly of Arab origin. They play, however, so important a part in the life of the modern Berbers that it is necessary to give some account of them.

† Primary education is given by the *Imâm* of a village ; for secondary education there is the *Mâmera* or college often placed near a *Zaouïa*. Teaching consists, as usual amongst Arabs, in the imparting of thousands of barren formulæ.

Unity of village
life.

Apart from its political organisation the most remarkable feature in the life of the village is the solidarity of its members. Even the unit is not the individual but the family. So close indeed is the tie that unites the family that it is considered as a single person ; its members are each liable indiscriminately for crimes committed by any one of them. Frequently the property of a family is left undivided and its revenues enjoyed by all in common, the administrator being the oldest man in the family if he is possessed of sufficient ability for the task. In such a case all the members work for the common interest, but each retains his own individual liberty and never abandons his hereditary rights ; it is a voluntary association which can be dissolved at will, a striking instance of community which is not communistic. Associations of all kinds are natural to the Kabyle character ; even members of different families will combine to put the profits of their property into a common stock, while the property itself remains in the hands of its owners ; labour is supplied by all the members, and property acquired during its existence belongs to the association.

Even when not pushed to the extent of community of enjoyment the idea of the duty of mutual assistance is never absent. A traveller who meets one of his fellow-villagers in distress away from home is bound to aid him at whatever trouble or risk to himself. A man who wishes to build a house can claim the assistance of the village, which is given under an organised system of contribution. The burdens of field-work and of harvesting do not fall solely upon the owner of the land ; he appeals to the neighbours of his quarter or of the village in general, who come in such numbers as are required, and when the work is finished the farmer and his family are ready in turn to give their labour to any of their helpers who may need it.

Finally, not only do individuals practise the most liberal charity, but the community itself makes provision for the poor, sets aside a portion of the public revenues for their needs, and if necessary levies a special tax for their support.



1. A TYPICAL VILLAGE—EL ARBAA.



2. THE SYSTEM OF TERRACE-CULTIVATION—MENAA.



3. STONES PILED ON A FIELD—WED ABDI.



4. SKULL OF A MULE HUNG ON THE FRUIT TREES—WED TAGA.



5. WOMEN WASHING CLOTHES AND WOOL FOR CARDING—NEAR OMM EL ASHERA.



6. TOMB OF A MARABOUT, WITH OFFERINGS—MENAA.

CHAPTER IV

GOVERNMENT OF THE AURÈS—CHARACTER OF THE COUNTRY—THE VILLAGES—HOUSES,
EXTERIOR AND INTERIOR—PHYSICAL TYPE OF THE PEOPLE

THE Chawía (pronounced “Sharweéa”) inhabit the Aurès mountains, a small tract of country lying just to the south of Batna and east of El Kantara. The central government of the district is vested in an *administrateur*, whose present quarters are at Lambessa, the little French village that has sprung up on the site of the old Roman colony of which it still bears the name. The office is of course held by a Frenchman, who is almost in the position of a petty governor set over this isolated branch of the great Berber family. With him rests the determination of all important matters, and he exercises a general control over the whole organisation. The natives are allowed to retain to a great extent that local autonomy of which the essential features were described in the last chapter; but the *administrateur* is very careful to ensure that the various Kaïds are not only capable of performing their executive duties but are trustworthy and loyal adherents of the existing régime. A staff of gendarmes who make periodical tours of inspection, and a corps of cavaliers some one of whose number is almost incessantly passing through the villages upon one errand or another, maintain a constant supply of information. Further, the *administrateur* makes personal visits at such frequent intervals as suffice to keep him completely *au courant* in the affairs of his little state. We were nowhere more favourably impressed with the efficiency of the government than in the Aurès.

Government of the Aurès.

It is from Lambessa that the district is most naturally approached. A steep ascent leads up from the plain in which the old Roman town is built to the first limestone ridge, which forms the boundary that has so long fenced off the native Berbers from foreign invaders. Passing over a col where in the middle of April

Character of the country.

the snow lies still unmelted, the traveller descends again some hundreds of feet to where a mountain-stream fed from the neighbouring heights flows briskly under dark-green holm-oaks. Soon he enters the forest where cedars fight for living room beside the hardier ilex, and then traversing a long hog's back thickly covered with Aleppo pine, breaks at the end of his first day's journey into the first of the five or six narrow valleys which constitute the whole of the country inhabited by the Chawía. It is a barren, bleak country that he enters. The olives that are so luxuriant in Kabylia cannot grow at such a height; the rough grey cliffs are incapable of cultivation, and yield at most a little scanty pasture, but the vivid green of the valley bottoms is more striking for the contrast. Orchards and fields, irrigated from the little stream that has worn itself a narrow channel and left a strip of fertile alluvium on either bank, appear like bright gardens when seen from the tops of the rugged hills that enclose them. They recall the brilliant valleys of Thüringen, save that the approach to them is so different; for the descent from the slopes above leads not through leafy forest, but through a thin scrub of stunted weather-worn trees.

The scenery in the Aurès is generally picturesque, but in no way grand or imposing. The mountains are not precipitous, and there are none of the sharp peaks that characterise an Alpine landscape. The impression is rather that of a steep hilly country than of a truly mountainous region. Here, as in many other parts of the Algerian Atlas, one is constantly reminded of the tamer regions of the Welsh or Scottish highlands. The people themselves are not mountaineers; they have no liking for the hilltops, but are industrious agriculturists who live in the valleys and cultivate the land that fringes the streams.

The villages.

The villages are characteristically peculiar. Their position and their aspect bring home to the mind the circumstances under which they were built and the history of their inhabitants. They are essentially fortress burghs; not indeed encircled with rampart or wall, for this primitive folk has never been trained in military engineering, but so arranged as to be admirably adapted for purposes of defence. Placed always in the valley, but at some little height above the stream, they cling to the steep sides of the cliff (Plate II. 1), or are perched on an isolated mamelon commanded only from distant heights and safe against any weapons less formidable than modern artillery. Outside the village are sometimes built watch-towers to overlook the surrounding country.

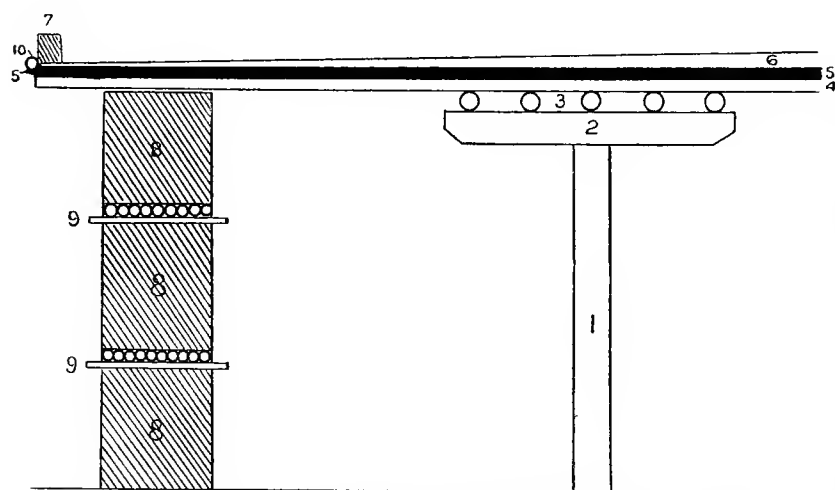
The disposition of the houses is directed by the same idea of defence that governs the choice of the site. They are built in irregular terraces one above the other, each of which forms as it were a fresh wall to confront an attacking party, while every tier is dominated by the next behind it. The appearance is very similar to that of the villages which the Pueblo Indians build to protect themselves from raiding Apachès. And the Chawia have had frequent occasion to avail themselves of their strongholds, for quiet and peaceful as they now seem they have been sturdy fighters in time past.* Before the commencement of the Christian era they had never been subjugated. The Romans themselves never penetrated into these valleys till the time of Antoninus Pius, and did not completely hold the country till a colony was established at Menâa during the reign of Marcus Aurelius. When the Romans were obliged to relinquish North Africa, the Chawia recovered in full the independence which they had never more than partially lost; and, in spite of a nominal conquest by the Arabs, they have remained almost unaffected by external influences until the present day. Hence it is that they are still a people of very primitive ways, who, with the conservatism natural to those who live in a low state of culture, have preserved their old habits and methods of life, their old arts and industries, without wishing to improve by foreign innovation upon what long experience has shown to be sufficient for their simple needs.

This backwardness in development is especially noticeable in the construction of Houses. their houses. These are built of small irregular stones, which are not in any way dressed or squared, but, at the most, broken across with a hammer to reduce them approximately to the required size. Anything in the nature of stone-mason's work seems to be quite unknown. On one occasion in the Wed Abdi we were astonished to observe squared blocks in the walls of a house; but the anomaly explained itself on closer inspection, when the well-shaped stones proved to be incised with Roman inscriptions. At the same time it should be remarked that, curious as it seems for stone-dressing to be unknown in a district where brick is not used and stone is the sole building material, there is a sufficient reason for the absence of the art in the fact that it is by no means indispensable. The natural stratification of the rock (which is apparently a shallow-water limestone) is such as to supply an infinite quantity of thin slabs, which only need breaking across to the requisite size in

* Cf. Leo Africanus, book v. "This exceeding high and populous mountaine is inhabited with most barbarous people that are wholly addicted unto robberie and spoile" (Pory's version).

order to fit them for immediate use. The upper and lower surfaces of such slabs are comparatively smooth and level, so that without troubling to dress them any more the builder has ready to hand a material which is very fairly adapted for his purpose.* A reasonably good house can be built of them if they are carefully selected and fitted according to size, a process which affords scope for the exercise of considerable skill; in fact it was very noticeable how far superior the builder's work was in some villages to anything that could be seen in others. The interstices between the stones of the wall are generally filled in with mud, and the wall itself (*afseil*) is divided into layers by horizontal courses of wood placed with more or less regularity at intervals of two or three feet apart (Plate III. 2). These courses (*asumti*) may serve to some extent to strengthen the building, but in general they seem to be intended simply to equalise the level of the laid stones.

The following diagram is intended to show the construction of the house.†



SECTION (DIAGRAMMATIC) TO SHOW THE CONSTRUCTION OF A WALL AND ROOF OF A CHAWIA HOUSE.

When the wall has been carried to the desired height, which seldom exceeds ten feet save in the few cases where (as at Menâa and El Baali) there are two stories, provision has to be made for the support of the roof (*sgâf*). According to the size of the area to be covered a larger or smaller number of columns

(*arâr*, or *aarsa*, 1 in diagram), generally of juniper wood, are set up. These are simply tree-trunks which are barked and left to be polished by usage; there would be about six of them to every two hundred feet of floor space, though the number would of course vary according to the lengths of timber available for the roof. Mortised to the top of the column is a solid beam about three feet in length (2, *musbah*). This crutch-head, as it may be termed, lies longitudinally to the room, and serves as a resting-place for the ends of the transverse rafters (3, *kântas*); which being rarely

* In cases where, as at Tagust, another kind of stone is used, the laying of the blocks is less regular.

† 8 in the diagram is the wall, 9 the courses.

long enough to span the whole breadth of the house are arranged in groups of two, three or more, one end resting on the solid wall, the other on the *musbah* (see Plate III. 1). The *kāntas* carry the longitudinal rafters (4, *taala*), which are generally about two inches in diameter and as closely packed together as possible. There may be another layer of transverse poles across these, but generally there is simply a packing of leaves and twigs (5) upon which the mud roof is firmly beaten down. This terrace roof (6, *stah*) may have definite drainage channels or may be simply sloped away towards the side or end; some such provision there, always is, in order to carry off the rain. In clearing the roof of snow in winter, a scraper with a long handle is used; but we saw nothing like a roller for the roof, and on the one occasion when it was necessary to render it water-tight, a man trod down the clay with his feet.

The eaves often have an overhang of eighteen inches, and a layer of beams is frequently fastened round the edge to prevent the mud being washed from the roof (10). Further, a coping of heavy stones (7) answers a similar purpose, and doubtless assists by its weight in keeping down the roof during gales.

Chimneys are generally simply holes in the roof. Sometimes (as at El Arbaa) an old earthenware pot with the bottom knocked out is inserted into the aperture, and, projecting a little above the general level, prevents the water seeking escape into the house beneath. At El Baali a few chimneys were built of stone and could be closed by a piece of sacking. At Bou Homar a couscous pot was hung by means of cords in the chimney, and could be hauled up by the people on the roof when required.

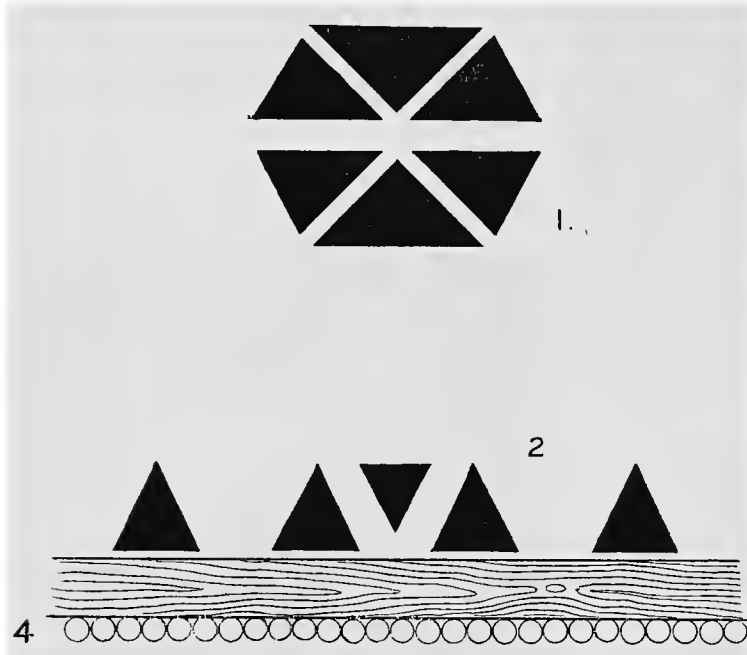
Inside the house the arrangements are primitive. There is generally a bed-frame covered with rugs and skins, a loom, a quern, a fireplace denoted by three or four large squarish stones, earthenware vessels, and (as at El Arbaa) huge plaited bins for corn, which somewhat resemble in shape a swollen amphora. Sometimes the domestic animals have a house to themselves; oftener they are relegated to a corner or end of the common room.

Most houses contain, besides, a raised divan or stone bench, upon which mats (*azharthil*) are spread.

In the *cafés* the chimney-corner is so arranged as to provide a tolerable draught for the charcoal fire; and a tambourine and fife are provided for the amusement of customers.

Doors are mounted on swivels at top and bottom, are very heavy, and generally badly fitted, though sometimes ornamented with shallow circular holes arranged in no particular pattern or order.

In the walls of the more pretentious Chawía houses various ventilating shafts have been left. Commonly these holes are triangular in shape and not more than a foot in greatest diameter. They are mostly arranged in rows, and sometimes, as in Fig. 2, they are surrounded by inverted triangles; which when repeated give rise to the



CHAWÍA WINDOWS—MENAA AND CHIR.

more ornate rose-window shown in Fig. 1. This form of aperture is probably borrowed from similar forms in Arab houses.

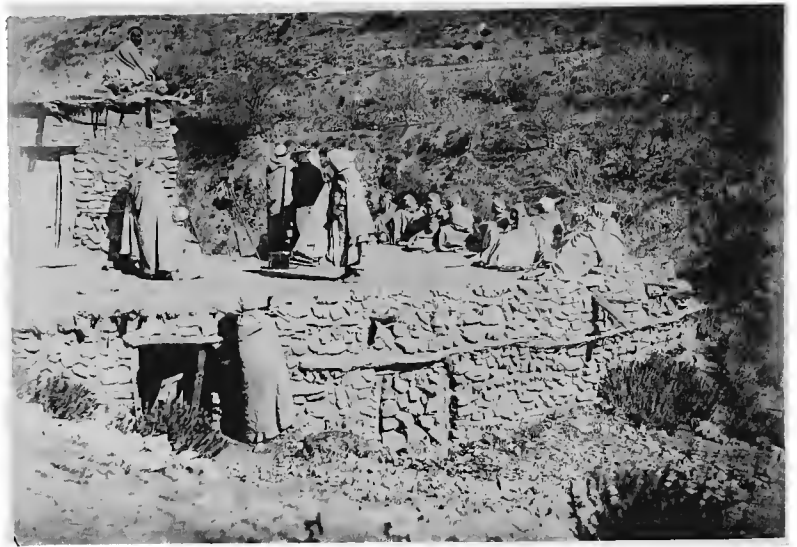
3 and 4 are simply the two elements in the timber course with which the walls are strengthened. It is naturally most convenient to place the "windows" immediately above the straight line of the topmost logs; and this had been done in the house from which the diagram was taken.

The general type of house that prevails is that which is shown in Plate III. 2, and which has just been described; but it should be stated that the character of the building is liable to considerable variation, as it is adapted as far as possible to the conformation of the ground. Thus according to its position the house may be little more than an enlarged cave, or it may rest against a cliff side with the natural rock as a fourth wall, or it may consist of nothing more than a roof placed over a depression in the soil.

The terms employed by classical writers in speaking of the rude dwellings of the Libyan tribes imply that they were wattle and mud huts, caves, and tents rather than substantial if simple stone houses such as the best of those described above. In the absence therefore of details with regard to the history of the country during the last thousand years, it must remain a doubtful point whether these houses are to be regarded as genuine and typical productions of the Berbers. It is quite



INTERIOR OF CHAWIA HOUSE, SHOWING CONSTRUCTION OF ROOF.



2. EXTERIOR OF CHAWIA HOUSES, SHOWING CONSTRUCTION.



3. INTERIOR OF FLOUR-MILL, SHOWING THE MECHANISM.



4. FIRING THE POTTERY, WHICH IS COVERED WITH A HEAP OF FUEL—CHÎR.



5. CHAWIA WOMAN FASHIONING POTTERY—CHÎR.

likely, however, that the circular watch-shelters (see Plate VIII. 5) which occur both here and in Kabylia may be the direct descendants of the ancient wattle huts.* On the other hand, the inhabitants of the Aurès, whom we know to have been settled for many centuries in the same district, may very well have evolved a somewhat improved type of dwelling without having had recourse to any foreign assistance or suggestion.

The Chawía are, at least in colouring, very good representatives of the white Libyans known to the ancients. All without exception are white-skinned though much sunburned, and the skin even where it is most exposed burns to the tint peculiar to white men, and resembles that of the fairer rather than of the darker races even amongst these. It should be remarked in the present connection that a noticeable difference in colouring exists between the Algerian natives of all kinds and the modern Egyptians. Even the Arabs of Algeria are noticeably fairer-skinned than the average fellah of the Nile valley, a fact which we attributed rather to intermixture of races than to the colder climate. The Berbers, however, are much whiter than the Arabs, and have a clearly marked type which makes them easily distinguishable apart from any indication afforded by manners or language. The Chawía and the Kabyles are obviously of the same stock, though we have been careful to keep our observations upon them distinct. In some ways the Chawía are the more interesting as they are more primitive and unsophisticated; but in spite of the different level of culture the two peoples are racially identical.

Physical type of
the Chawía.

The Chawía are generally speaking remarkably European in their appearance; many might have passed for Irishmen or Scotchmen. The boys in particular when about the age of fifteen or sixteen would if put into similar dress be almost indistinguishable from English lads of the same age. In seeing a large number of them, however, it would certainly occur to an observer that the preponderance of dark hair was in excess of what would be found in most English districts. Fair-haired men, as blond even as North Germans, are to be seen; in some villages indeed they are fairly numerous, but even taking each village by itself there was no instance in which their numbers seemed to equal those of the dark-haired men, whilst ordinarily they were in a very small minority. In fact if the Chawía are at all typical examples we are forced to conclude that too much stress has commonly been laid

* Cf. Rohlfs on the dwellers in the Draa Oasis. "Some of the Berber tribes also have these palm-huts for dwellings" (*Adventures in Morocco*, p. 348).

upon the occurrence of fair-haired individuals amongst the Berbers* ; while on the other hand it has hardly perhaps been sufficiently noticed that all without exception, whether their hair and eyes be dark or light, are invariably fair-skinned, much fairer than a typical Tuscan or Spaniard. The normal combination is black hair and brown or hazel eyes ; blond hair with blue eyes occurs much more rarely. In stature the men are of medium height, averaging about 5 feet 7 inches, and in build they are spare though strong.

The women when quite young are good-looking, but their beauty has been generally overrated by the travellers who have described them. They come to maturity very early, are past their prime at twenty, and a very few years later they are withered hags. As is well known, they do not veil their faces as do the Arab women ; but it must not be inferred from this that they are allowed any the greater liberty. They are guarded with the strictest care, forbidden to go near any place where men resort, and jealously overlooked in all their doings. In physical type they seem to be the counterparts of the men ; the black hair, which is quite invariable amongst them, seems at first to be a distinguishing feature, but its unvarying occurrence is no doubt due to the same practice which obtains among the Kabyle women, who dye the hair with gall-nut at frequent intervals beginning from early childhood.

* Thus Shaw, *Travels*, vol. i. chap. viii. says : "The Kabyles of these mountains of Auress have a quite different mien and aspect from their neighbours. For their complexions are so far from being swarthy that they are fair and ruddy ; and their hair, which among the other Kabyles is of a dark colour, is with them of a deep yellow." See more details on this point in chap. xiii. of the present volume.

CHAPTER V

CHAWÍÁ LIFE AND INDUSTRIES

AGRICULTURE—THE PLOUGH—MILLS—FOOD—MANUFACTURE OF CLOTHES—SILVER-
WORKING—CARPET-MAKING—INCISED WORK—CARVING

THE staple industry of the inhabitants of the Aurès is agriculture. Along the banks of the stream above which each village is built there is a narrow strip of cultivable land upon which the utmost care is lavished. As the water cut its passage deeper and deeper into the valley it left deposits of fertile soil, which have been ingeniously converted into little fields by building up the natural terraces with walls of rough stones. The view of Menâa in Plate II. 2 shows this system of terrace-cultivation at its best. Menâa being a village situated at the junction of two considerable streams has a large tract of ground under cultivation, but in most cases there is much less. At El Arbaa the valley is so narrow as to be little more than a ravine, 80 or 100 yards across at the bottom; and here the fruit-trees grow right down to the water, and the cornfields are painfully buttressed up against the steep banks. In this way are grown wheat and barley and many varieties of fruit-trees, of which the chief are walnuts, figs, pomegranates, and apricots. A simple form of irrigation is in use, the stream being led off at its highest level, which is generally at some distance from the village, and conducted through small channels from which the plots are watered. No artificial means are employed for raising the water, so that cultivation cannot be carried on above the greatest height which the stream touches in its course through the valley; and the amount of land which can be utilised for the crops depends directly on the steepness of the stream-bed and rapidity of the fall of the water.

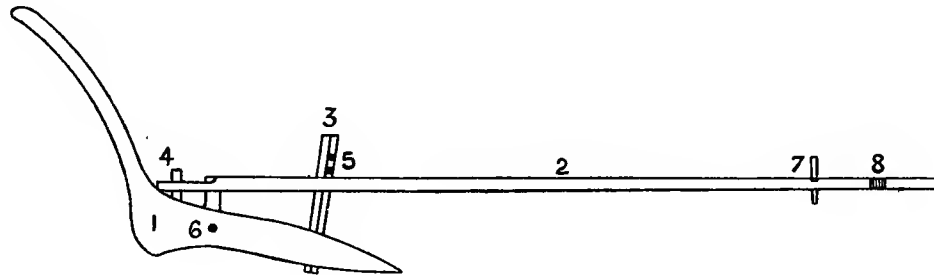
Piles of stones are frequently placed all over a field (Plate II. 3) for some purpose

which we could not exactly ascertain. Probably, however, the practice is similar to that which Hanoteau and Letourneux note as existing among the Kabyles,* who place heaps of stones upon a field to show that it is reserved for hay.

The skull of an animal, generally a mule, is often hung upon the fruit-trees (Plate II. 4). The object of this is to prevent the fruits falling, or, as others explained it in more general terms, simply for good-luck; similarly a skull is placed among a group of beehives, and when a house is newly built a skull is placed upon it. The last of these cases is interesting for its analogies; the Greeks used to ornament buildings with *βουκράνια*; Professor Flinders Petrie has found the painted heads of oxen which had apparently been used in a similar way in the graves of a people whom he considered to be Libyans, at Hou in Upper Egypt; and finally Mr. J. E. Quibell found the ox-head represented as an ornament of the house in sculptures of the proto-dynastic Egyptians at Hierakonpolis.

The plough.

For ploughing, oxen of the ordinary dwarf breed found in the country are used, or sometimes, but less commonly, mules. The plough (*muharrâth*) is a simple



CHAWIA PLOUGH—BOU ZINA, AURÈS.

implement, of which the accompanying diagram will give an idea. It has only three essential parts, viz. the pole, the handle and share, and the connecting ties. It is almost the same as that which is used by the Kabyles, save only that the latter, who are in all respects in advance of their Chawia kinsmen, have added a short iron shoe to the point, which makes it considerably more effective.

The handle (1, *sili*) and share are of one piece of wood, the whole measuring about six feet from the end of the handle to the point of the share. The pole (2, *athmûn*) is secured to the *sili* by twin cross-bars (3, *thafrûth*), and by pegs and keys (4 and 6, *thazdiith* and *bwimzhân*). The keys at 5 are called *âderas*.

In the end of the pole are a peg (7, *thamsîkerith*) and a square hole to which the yoke and harness are attached. The ploughs do little more than scratch the surface of

* We ourselves noted the practice in Kabylia, but did not find out the reason for it.

the field. They are so light as to be readily carried on a man's shoulder or on the back of the diminutive donkey of the country. The absence of an iron share must also detract somewhat from their efficiency.

The Hoe, which is constantly used in field-work, consists of two parts, viz. the wooden handle (*tharz hukht*) and the blade, which is about a foot long, and is slipped into the haft from the lower and smaller end. The blade has a pointed end (*izóghzok*) like a pick-axe, and a cutting edge (*thamsht*), which is in the same longitudinal plane as the haft.

Querns or handmills of stone are used in the houses, and these were no doubt at Mills. one time the only means employed for grinding corn,* but watermills (*erraha*) are not

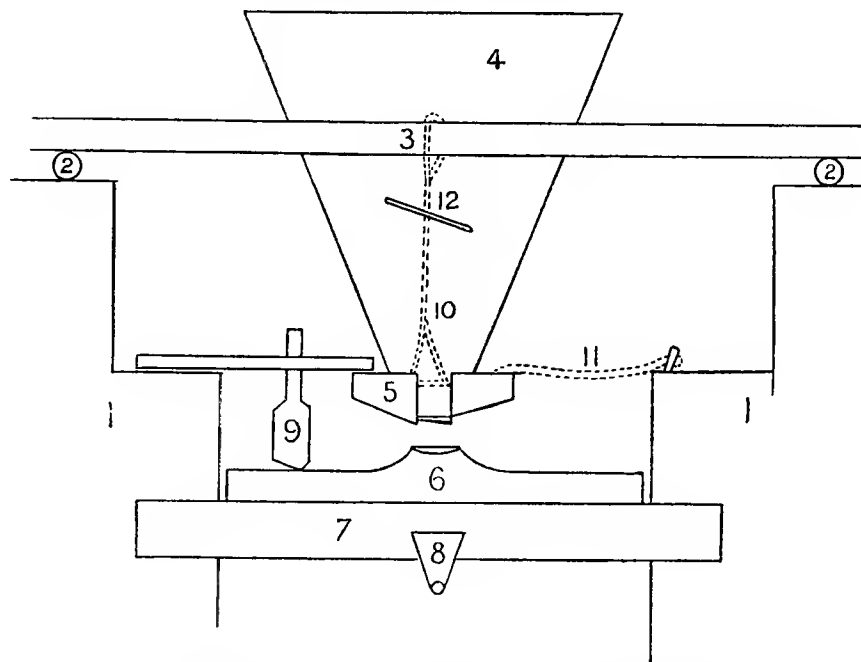


DIAGRAM OF PART OF A CHAWÍA WATER-MILL AT BOU ZINA

uncommon in the Aurès.† A photograph of the interior of one of these as it was seen at the village of Bou Zina is shown in Plate III. 3, and the mechanism of such a mill may be made more intelligible by the subjoined diagram.

The Chawía tap the main stream at a greater or lesser distance above the mill (which is itself upon the bank), according to the rapidity of the current, and the

* The quern seems to be general throughout North Africa. Cf. Leo Africanus, bk. ii., who says of the Moroccans of Haha: "It is somewhat strange that so many rivers running through the country they should have such scarcitie of water-mills: but the reason is because everie household almost have a wooden mill of their own whereat their women usually grinde with their hands" (Pory's version).

† The type which is described in this section is known elsewhere. Mr. H. Balfour informs us that a very similar mill is in common use in Bosnia. Cf. a model of the Bosnian mill in the Pitt-Rivers Museum at Oxford.

amount of power desired. Chutes (*Mizab*), about a foot in depth and breadth, conduct a steady stream (*Thergla*) of water to the mill, their number corresponding to the number of separate wheels to be driven.

The jet of water from the chute impinges directly upon a turbine wheel (*rish*), mounted on a shaft or axle (*sari*), and is at once discharged into the main stream. Both turbine and shaft are of wood, but resemble in other respects the steel machinery imported from France for the use of the colonists. Still, though the presence of querns or hand-mills in the houses of the Chawia seems to indicate for the water-mills a comparatively modern introduction to the Aurès, there is no reason to think that the natives first learnt the use of turbines from the French.

Within the mill are one or more sets of machinery corresponding to the number of turbines installed beneath. In the mill observed at Bou Zina there were two, the smaller of which was standing idle at the time of our visit, thus permitting us to obtain the photograph reproduced in Plate III. 3. The larger apparatus differed from it only in point of size, and in the nature of its supports; for while the beams (2 and 3) of the former rested on special piers of masonry (1), those of the latter were simply carried by the walls of the house itself.

Rigidly attached to these cross-beams was a hopper (4, *dlu*), open at the top for the reception of the grain* and pierced at the bottom by a small aperture through which the contents found their way into a trough (5, *Mizab*). This trough was held at about the angle of rest by the double ropes 10 and 11; 10 being tightened up as required by twisting with a small piece of wood (12), 11 serving only to prevent excessive lateral oscillation.

The rate at which the grain was fed from the trough into the hole in the centre of the upper grindstone (6, *Thasirth*) was ingeniously regulated by the simple device 9 (*Thazduth*). This consisted of a rudely squared piece of wood, one end of which was firmly attached to the trough (5), the other allowed to rest free on the masonry (1); while through its centre, and secured by a peg at right angles to it, passed another bottle-shaped block, the heavy end of which, resting on the rough surface of the upper grindstone and oscillating as it revolved, transmitted its movements to the trough in which the grain rested. The faster the grindstone turned, the faster rattled the vibrator (9), and the faster fell the grain from the mouth of the *Mizab* into the orifice beneath. As soon as the water supply is cut off at the sluice, the turbine ceases to

* Here mostly barley, *thimzinth*.

actuate the grindstones, the vibrator becomes motionless, and the grain stops automatically at the angle of rest.

The front of the grindstones is hidden by a board (7), in which is the funnel (8, *Mízab*), and through this funnel the flour (*ern*) escapes to the floor, whence it is periodically removed by the attendant.

To prevent the flour-dust from being blown about and wasted, the top of the grindstones (all except the orifice for the grain) and the vibrator are further covered in with pieces of sacking (*Asfirgh*).

The meal after being ground is made either into thin flat cakes of bread, which Food. taste not unlike oatcake, but are too redolent of mutton fat to suit the European palate, or into *seksou*, as the Berbers call the dish, better known by its Arab name of couscous. *Seksou* is the chief article of food among both Chawía and Kabyles (whose simple dietary is indeed identical); many families hardly ever taste anything else. A guest, who is, of course, treated with exceptional liberality, will be given first a soup made very hot with peppers; then *seksou* and a fowl, or perhaps a mutton bone with so much of the meat upon it as has not been cooked away in the process of preparing the *seksou*; and lastly nuts with honey. Honey is fairly plentiful, for the Chawía keep many bees, in doing which they are following an old Libyan practice, for Herodotus remarks of the Gyzantes* that, in their country, "a vast deal of honey is made by bees; very much more, however, by the skill of men."

The cooking is all done by the women, who use for preparing and serving the food such pots as are shown in Plate IV. The pots themselves are also made by the women; the manufacture of them is described, and their types are discussed in the next chapter.

The villages of the Aurès are almost entirely self-supporting; only a few minor accessories are imported from outside. The clothes of the inhabitants, mere woollen blankets for the most part, are manufactured in their own homes from the wool of their own sheep. The whole of this work is done by the women. The wool, after it has been washed, is spun by hand with distaff and spindle. The spindle is of the ordinary simple kind, a piece of stick with a wooden disc at the top, above which is the hook for catching up the wool; it is twisted with the right hand, while the distaff is held in the left. When spun the wool is woven on a very serviceable loom; which will be described more in detail in the chapters that treat of the Kabyles, who use precisely the same (see Plate IX. 3). The blanket when finished is a close-textured warm garment of

Manufacture of clothes.

* Who be it noted are the immediate neighbours of the Zauēkes.

pure wool, which, when its sides have been sewn together and a hood has been formed, becomes a burnous. The price of a good white burnous thus made seems to be about 20s. to 30s. in English money.

Silver-work. These few industries may be said to include all that is essential to the life of the people. Their other occupations rank under the heading of the production of luxuries. First amongst such occupations must be placed that of the silversmiths, whose art is of great importance in a country where the women wear their entire fortunes upon their persons. Only silver is used, never gold.* Coral is commonly employed, but precious or semi-precious stones are unknown. The silver is obtained from old coins and is therefore fairly pure; the coral is imported from the coast and priced absurdly above its value. The workmanship of the ornaments produced is by no means bad, though somewhat wanting in finish; the style is heavy and barbaric, quite lacking in delicacy or grace. In Plate V. 1, 2, 3, 5 are figured examples which show the chief types in use; there is little variety among them, the makers evincing no sort of inventive spirit. Almost every piece is studded with lumps of coral, and its market value is in proportion to their number and size. The surface of the silver is generally engraved with some skill; the origin of the patterns however it is difficult to trace, as they are evidently much degraded from the original motives whatever these may have been.

Carpet-making. The manufacture of carpets is one of the most important employments of the women; it is here that such sense of artistic decoration as the Chawía possess is chiefly manifested. Every Kaïd, however poor, has at least one magnificent rug or carpet, which he brings out and lays on the floor to receive any distinguished visitor. The work is highly elaborate, with patterns of various coloured wools. Some of the motives are shown in Plate VI. 1, 2, 3; the lozenges, squares, herring-bones, lattice and cross-branched lines are very characteristic and bear a close resemblance to Kabyle designs. The tree-pattern and the camel are especially interesting; both are found also in Kabyle pottery, in which however the tree is less clearly delineated (cf. frontispiece, Fig. 2).

The patterns on the carpets shown in our plate were picked out in green bice, dark-blue, orange-yellow, and white, on a background of dark red. Some of the colouring matters are imported. The red (*lúk*), the orange (obtained from pome-

* The Beni Mzab are said by Mme. Jean Pommerol (*Among the Women of the Sahara*) to use gold. The same writer states that the Saharan women attribute a talismanic virtue to coral.

granate bark?), the yellow (from juniper bark) were apparently of native production ; the indigo-blue was said to be traded from Tunis.

The incising of patterns is familiar to the Chawía. It is to be seen at its best Incised work. in the snuff-horns which are decorated with various motives, of which the favourite are the lozenge and the chevron.

Under this head may perhaps be included the tattoo-marks which are to be seen on every woman and on some of the men. They reproduce the designs found in other classes of work.

Carving is not carried to any great height of perfection ; the best examples of Wood-carving. it are to be seen on wooden powder-flasks. The tools which are in use are not very well suited for fine work ; on one occasion a man was seen scooping out the bowl of a wooden spoon with an adze which he held by the blade close down to the point. The spoon was afterwards finished off with a knife.*

* The adze was an interesting tool. It had been made in the village and was of a type familiar among bronze celts. The head was seven inches long and two inches wide in its broadest part, but the middle was considerably narrower. It was attached to the crook-shaped wooden haft (fifteen inches long) in the following manner :—Its under side was hollow for about half its length, the two sides or lips being approximated to each other and turned slightly back. Into the aperture thus formed was driven the end of the haft which became tightly wedged and compressed between the top of the adze-head and the contracting lips.

CHAPTER VI

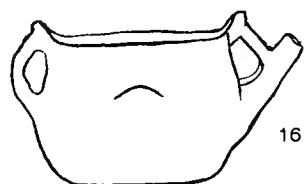
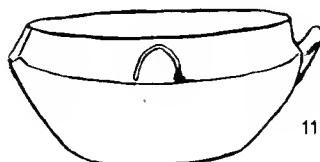
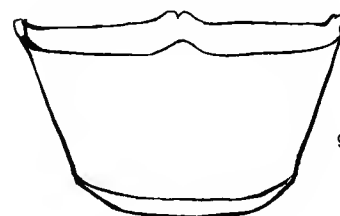
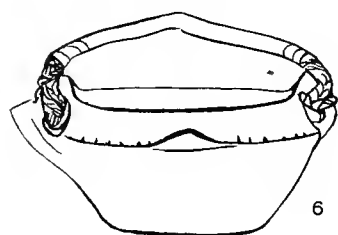
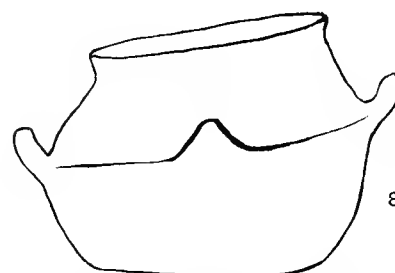
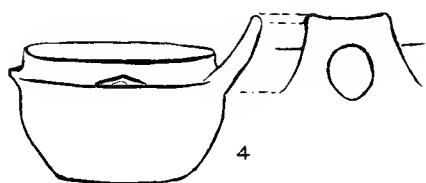
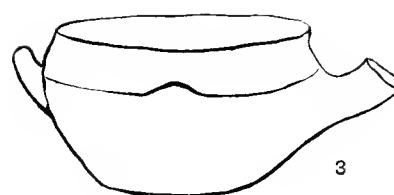
CHAWÍA POTTERY

THE study of pottery is one to which the archæologist finds himself bound to ascribe an importance which the ordinary reader may perhaps consider disproportionate. But no one who has been compelled to infer from scattered sherds the age of a cemetery of the very existence of which these sherds are almost the sole external evidence, no one who has known how a Greek site can be dated by a couple of square inches of painted vase, or who has been enabled by finding a fragment of red Samian ware to assign a puzzling mass of stones to its true Roman period, will underestimate the importance of pottery. From the very fact that they are so perishable, earthen vessels become the most lasting evidences of antiquity; for they are manufactured in such quantities that the fragments at least cannot disappear, and a site on which little else may be found will always yield relics of pottery. Again as being constant and familiar household objects pots frequently become the earliest medium for design and ornamentation. Any new idea of form, any new motive of decoration that an inventive neighbour can supply is employed first of all in the ceramic art; and it is generally through its application to pottery that it becomes familiar to artists in other branches, who then adapt it to the various materials in which they work.

At the outset, then, of an inquiry into the developments of art and design in many countries recourse must be had to the pottery, since it is this which at once furnishes the most abundant material for study and preserves the greatest possible variety of changes and modifications in design.*

The civilisation of a people may in a great degree be measured by its skill in ceramics, and the more primitive the people the more is this the case. As the

* This is a general but not a universal rule. It would not apply to southern latitudes; in New Guinea for example the small amount of pottery that is made is unornamented, while bamboos, pipes, gourds, and tortoise-shells are elaborately decorated.



arts increase in number and develop in complexity the manufacture of pottery loses somewhat of its pre-eminence; but with a people still in its childhood, or with one whose childhood has prolonged itself into what should be mature life, it is pottery which marks the level to which culture has attained, which indicates its origin and which betrays any influence that has been exercised by neighbouring civilisations.

It is for this reason that a considerable amount of our space is given to the consideration of the pottery of the Algerian natives as affording the readiest test of intertribal connections in culture; while much of the remainder is devoted to anthropometry, which alone can decide the further question whether such connections are the outcome of racial affinities or are due merely to direct or indirect commercial intercourse.

After what has already been said of the primitive character of the Chawía and of their low level of development, it is not surprising to find that their pottery is extremely rude and simple. Like that of the Kabyles it is all hand-made, the wheel is unknown. But hand-made pottery may attain great perfection of form, as Egyptian examples show; and if the Chawía have contented themselves with the roughest and least beautiful types, the cause of this is their lack of inventive or æsthetic sense and not the limitations of technical skill. For it is with precisely the same equipment that the Kabyle women succeed in producing a great variety of curious and even graceful forms, while they have preserved a tradition of decoration unknown to their cousins in the Aurès. Examples of Chawía pottery are shown in Plate IV. The forms are all of the most primitive order, little superior to neolithic models, and in several cases identical with these. A bowl with the simplest of handles and, when it becomes necessary, with a spout for pouring; such is the fundamental type. The bowl develops into a cup, the cup is finished perhaps with a second handle; this is the highest stage of evolution that is attained; the requisites of convenience are satisfied and what need is there to go further? These pots are for use not for ornament. They are to serve for the simplest purposes of cooking, and for holding water or milk or the gravy that is to be poured over the couscous. It never occurs to their makers to shape them into graceful curves or to decorate them; they would be no better but rather the worse adapted for household purposes, and the poor villager does not care for what

will not be of use to him in his daily life. A backwoods-man does not drink from a Chelsea teapot; a plough-boy does not eat off Derby china.

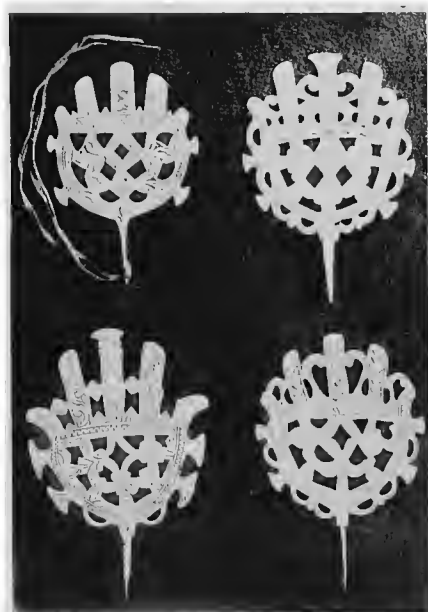
The Chawía make their pottery at the present day in much the same fashion as their neolithic ancestors must have made it. Most households manufacture for themselves, the women being the potters. About once a week a new batch is produced; but the makers are more or less intermittently employed in the intervals. The process of manufacture is very simple. The woman seats herself on the ground with water and some of the coarse yellowish clay beside her; she moistens the clay and kneads it with the palm and edge of her hand, then puts a lump down on a piece of broken crock which serves as a base. With her thumb she presses a hollow in the centre of the clay lump and fashions the outside and inside until the form is complete (Plate III. 5). We saw no implement of any kind being used; at most a small piece of stick may sometimes be taken for removing superfluous clay. The smoothing of the surface is all done with the thumb, and burnishing is unnecessary for this rough ware. When the desired shape is obtained the pot is left to dry. Two days are generally allowed for the drying process, and then it is ready to be baked. The furnace is no more elaborate than the rest of the equipment. A small ring of stones is made in a free space outside the house, and the pots are put inside (Plate III. 4). They are then covered over with fuel, for which anything that comes to hand is used—at Chîr the material was mainly old grass shoes. The fire is lit and the pots left inside for a short time, perhaps about twenty minutes. Then they are raked out, and while still quite hot are rubbed over (generally only as far down as the bottom of the rim) with a red resin called *Lúk*.* When this has cooled the process is complete.

With the exception of the example shown in Plate IV. 1, there is no sort of ornamental design used upon any of them. In this particular case the pot has been coloured with the red resin in the usual way, but panels have been left vacant on the rim, and these have been filled in before firing with a rude cross-hatched pattern in light red (apparently ochre). Of the hundreds of Chawía pots which we saw only this single kind had even any rudimentary design upon it. As a rule the sole departure from the strict demands of utility which the potters allow themselves, is the occasional adding of a raised pattern by an extra strip of moulded clay (IV. 8), or the forming of ridges, bosses, and indentations in the surface. This style of work

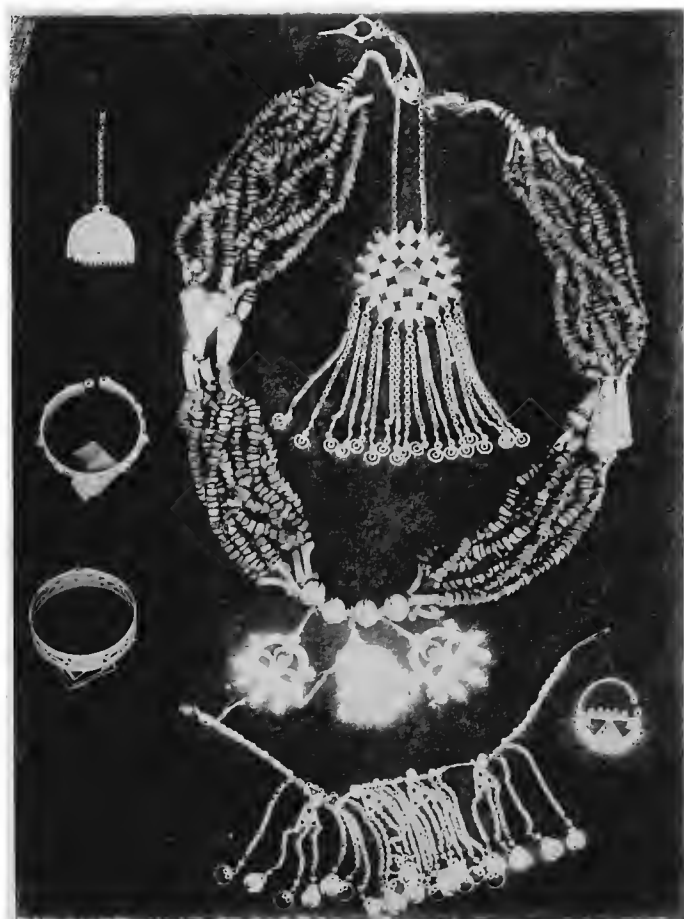
* It is apparently raw shellac.



1.



2.



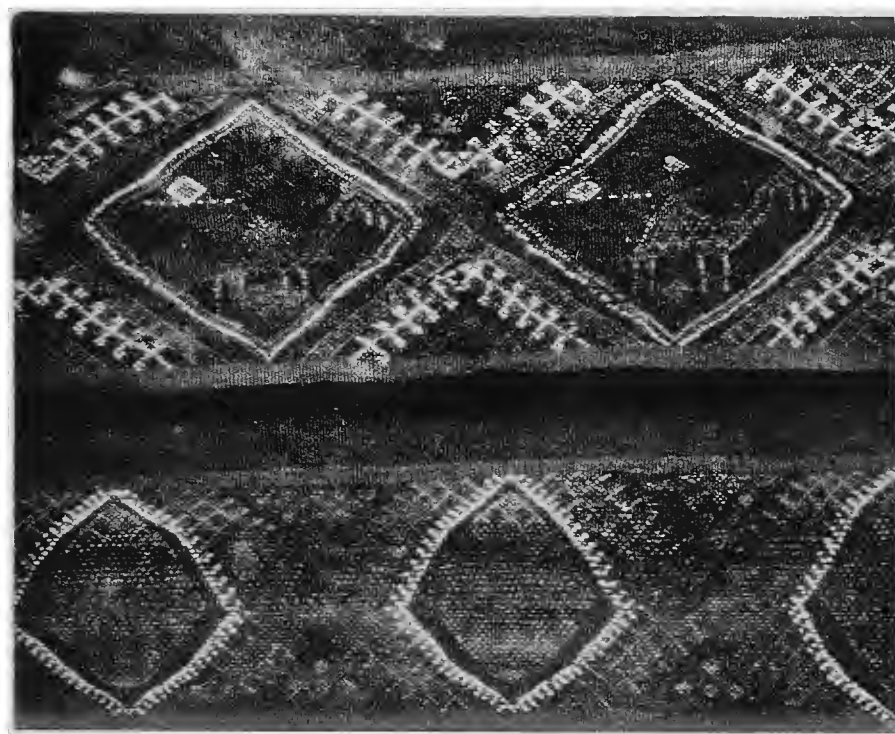
3.



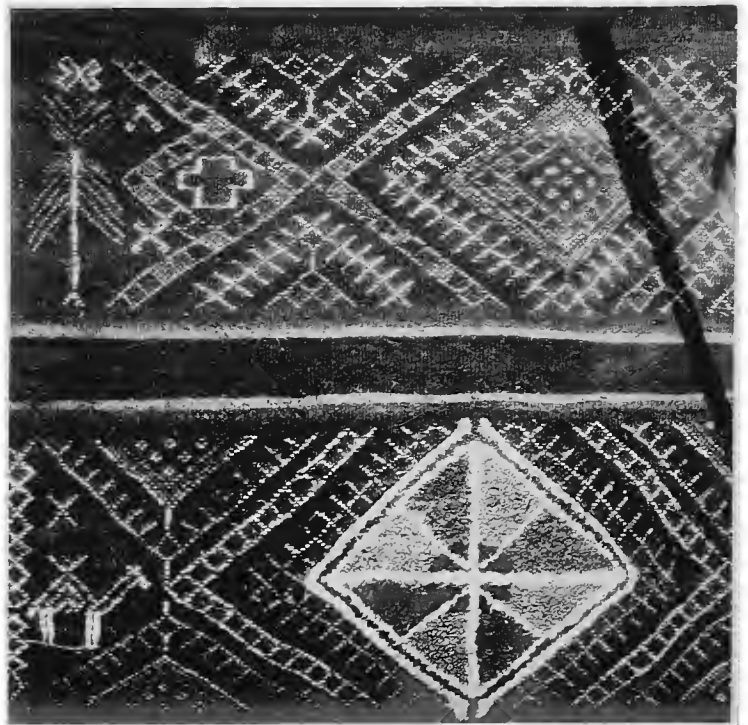
4.



5.



1. CARPET MADE AT BOU-ZINA IN THE AURÈS.



2. CARPET MADE AT BOU-ZINA IN THE AURÈS.



3. CARPET MADE AT BOU-ZINA IN THE AURÈS.



4. DOOR AT GELAA IN KABYLIA.

is common in the earliest Italian pottery. Indeed, the general resemblance of the Chawia types to those found in prehistoric settlements in Italy is very remarkable. Thus the peculiar handle seen in IV. 4 is a form typical of the "terramare" of North Italy, though surviving long after neolithic days as it occurs in an iron age cemetery at Novilara near Pesaro.* It was found also in a rifled Sicilian grave near Syracuse.† Again the Chawia pot in Plate IV. 2, which is also distinguished by a very peculiar handle, is closely paralleled by one from Novilara (Brizio, *loc. cit.* Pl. X. 14); and Nos. 18 and 20 of our Plate IV.—though it is true they are undistinctive shapes—are almost identical with the Novilara pots shown in Plates VIII. 51, IX. 23, and X. 38 of Brizio's work. The couscous pot of Plate IV. 6 is indeed of a not very distinctive form; it is such as almost any people might chance upon, but it is singularly like the great *olla* of the *terramare*‡ and of the Sicilian graves. Another type of couscous pot, which is not given in the illustrations, had vertical ring-holes in place of the mere protruding bosses of that shown in IV. 6; and such a variety is at once more distinctive in character and nearer to the Italian model. Pots resembling Nos. 5, 6, 13, 18 of our Plate IV. were discovered in excavations on the little island of Pantelleria; which, as there is no potter's clay to be found there, probably imported most of its ware from either Africa or Sicily—perhaps from both.§

A peculiar characteristic of some of the Chawia pottery, which occurs also very frequently in some of the rougher Kabyle forms, is the connecting bridge between the body of the vessel and the spout. The same feature appears in the pottery from a neolithic village in Apulia attributed to the early Sicilians.||

The form shown in our Plate IV. 3 is almost identical with Egyptian pots of the prehistoric and fourth dynasty periods;¶ but it would not be justifiable to build much upon this resemblance, for it is simply a neolithic type and hardly characteristic of any one country in particular.

In short, the Chawia pottery affords no especial evidence of connection with Egypt, but reveals a close and quite unexpected relationship to very early European and especially to Italian models.

* Brizio, "Necropoli di Novilara," in *Monumenti Antichi*, vol. v. Plates VIII. 49 and 53.

† Orsi, "Necropoli presso Siracusa," in *Mon. Ant.* vol. ii.

‡ See e.g. Pigorini, "Terramara Castellazo," in *Mon. Ant.* vol. i. punt. 1.

§ See Orsi, "Pantelleria," in *Mon. Ant.* vol. ix. punt. 2.

|| See Giovanni Patroni, "Un villaggio siculo presso Matera," in *Mon. Ant.* viii.

¶ See "Nagada and Ballas," Plates XXII. 20, XXXIX. 22, XLV. 1a.

CHAPTER VII

KABYLIA—ITS INHABITANTS—VILLAGES—HOUSES—CEMETERIES

Kabylia. KABYLIA is a term without very precise geographical limitations, the name of Kabyles being given in general to all the Berber tribes who inhabit the coast mountains of Algeria.* Commonly, however, the employment of the word is somewhat restricted, and Kabylia in its ordinary signification may be considered to denote on the one side the districts which immediately border on Bougie, and on the other those which centre about Fort National. This tract of country is divided into two almost equal portions by a fine river, the Sahel; and the western half, which includes the magnificent Djurdjura range, is sometimes distinguished as "Great" Kabylia. The natural features of a great part of it have been so minutely described by Hanoteau and Letourneux that it is needless to devote more than a few lines to depicting their general character.

If the Aurès region has been said to consist of rugged highlands rather than true mountains, Kabylia must be exempted from any such detracting. The lofty crests of the Djurdjura dominate the whole country, and there are few points from which Lalla Khadidja (7542 feet) and her sister peaks cannot be seen. East of the Sahel the mountains do not rise to such imposing heights, nor break into similar groups of jagged peaks, but the cliffs at Gelaa are more than 3000 feet above the sea, with splendid precipices (Plate VII. 5). The Sahel and the Sebaou are the great rivers of Kabylia, and are fed by numerous smaller streams cutting their way between the undulating tree-clad hills that descend from the Djurdjura to the coast.

The land is not extraordinarily fertile except in the broad valleys of the two chief

* Possibly the wide range of the term Kabyles may be explained by the circumstance that the "Kabales" of Herodotus would have been among the very first of the Berber peoples with whom the Arabs, entering North Africa from the east, came into contact. The name would thus have come to be used of Berbers in general; and perhaps the resemblance to the Arabic word *Kaba'il* (tribes) encouraged its diffusion.

rivers, but it is cultivated with the minutest care. Wherever the little oxen can drag a plough the thrifty Kabyle sows his corn; and fig-trees and olives flourish everywhere. There is no lack of space; it is not as in the Aurès, where cultivation is limited to a narrow belt along the stream; here rolling slopes and clustered knolls and mamelons give ample room for the peasant farmer's crops.

Olives grow with a luxuriance that is rare in Europe; their very character seems almost changed; free-branching and tall they hardly resemble the storm-twisted trees that are seen in Italy. Much of the country is richly forested; several species of oaks, of which the most frequent is the ilex, with here and there a few cork-trees or a carob, clothe the sides of the deeper glens. Wild flowers abound; tall shrubs of yellow genista and bushes of mauve or white rock-roses grow everywhere about the hills, and the stream beds are almost choked with oleanders.

The people are not mountaineers; it would be an error to conceive them as being The inhabitants. like Swiss or Tyrolese—they resemble these as little as their country resembles the Alps. Few villages are built high up in the Djurdjura range, and the steep mountains are visited only by the shepherds in search of pasture. It is among the lower hills that the Kabyle lives; he is not a crag-climber nor a hunter, but a most laborious tiller of the soil. As far as physical type is concerned, the Kabyles may be described in precisely the same terms that have been used in speaking of the Chawia. Like the latter they are essentially *white* men, generally with black hair and brown or hazel eyes. Blonds occur among them, in varying proportions in different districts; but are almost if not quite invariably in a minority, so far as could be judged, even in any single district. Probably, however, the stock has been kept less pure than among the Chawia, for among the Aït Aïssi at Tamaosht there occurred a considerable number of men with heads which were both smaller and rounder than those of the normal Berber type, which is subdolichocephalic; but even here the typical form was at least as numerously represented as the other. Down in the plains and in the neighbourhood of the European colonies there has, of course, been a great deal of crossing of stocks; but on the whole the native type seems to predominate. It would be interesting, if not altogether easy, to conduct an enquiry with the view of discovering the exact effect of such crossing, and of deciding whether the offspring of mixed marriages tends to reproduce rather the physical features of the native or of the alien race. The study may be commended to those who have not the opportunity or perhaps the inclination to visit the Kabyles in the dirt and discomfort of their homes. For our own part we

deliberately avoided taking measurements or photographs, or making special observations, anywhere except where the position and circumstances of the village afforded a good prospect of dealing with the untainted native source.

Though, however, the Kabyles are ethnologically identical with the Chawía they are very far in advance of them in respect of civilisation. An approximate idea of their relative position might be given by saying that the Kabyles are as far superior to the Chawía in material culture as the English of the Stuart period were superior to the English of the twelfth century, or the Spaniards of Cervantes' time to their rude ancestors of five centuries earlier. Arts and industries unknown in the Aurès flourish in Kabylia, and such as are common to both have been carried to a far higher degree of perfection in the latter country.

Villages. Kabyle villages resemble those of the Chawía in one respect only (excepting for the filth and squalor which are equally inseparable from both), namely, that they are always built on eminences and admirably adapted for purposes of defence. A very typical example is shown in Plate VII. 1, where a view is given of the village of Tazaïrt close to Ighil Ali, in the administrative district of Akbou. The houses are not, like those of an Aurès village, built in tiers, one behind the other, but are allowed to straggle along the slopes of the hill. Usually, however, the rise is so steep that the lower houses are completely commanded from above, and the crest of the hill would serve as a citadel in case of emergency. Often, too, advantage is taken of a cliff at one side, and houses are built so close to its edge that their outer walls form a vertical face, which unites with the cliff to present an inaccessible face. The Kabyles, who have been an extremely warlike and quarrelsome race, have had frequent occasion to avail themselves of these provisions for security. Whenever it is possible the site of the village is placed just above a stream, but the numerous springs that rise in the hills make this in many cases unnecessary.

Near the entrance of the village is always the Djemâa (Plate VII. 2), and in some part is to be seen the unimposing mosque (Plate IX. 5), beside which in rare instances stands a bath-house (Plate IX. 6).

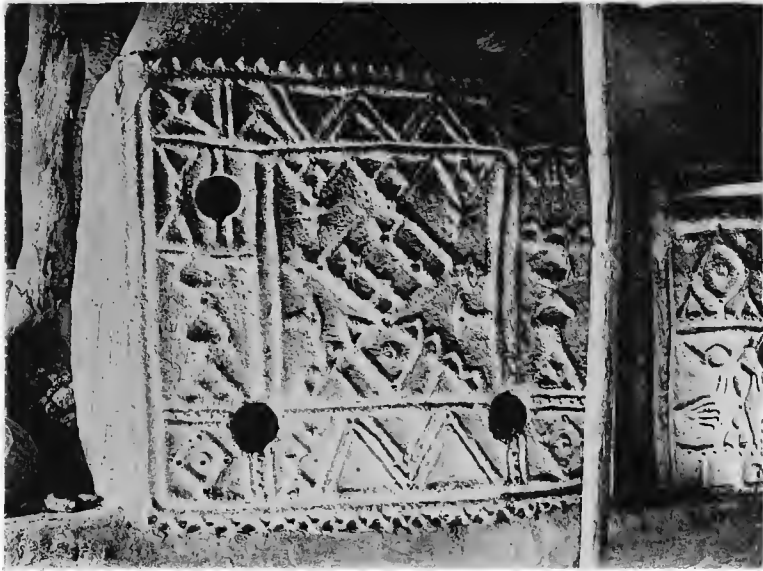
Houses. Kabyle houses exhibit a great uniformity of type, and are entirely unlike those of the Chawía. Ordinarily few have more than a ground floor, but at Tazaïrt and Ighil Ali a considerable number possess a second story to which access is provided by means of a ladder. The Chawía timber-course is altogether absent in Kabyle walls, which, however, in the case of yards and enclosures are topped with a layer of brush-



1. TYPICAL KABYLE VILLAGE—TAZAÏRT.



2. THE DJEMAA—GELAA.



3. CLAY GRANARIES INSIDE A HOUSE—TAGAMUNT-AZUZ.



4. INTERIOR OF A HOUSE—TAGAMUNT-AZUZ.



5. VIEW OF GELAA.

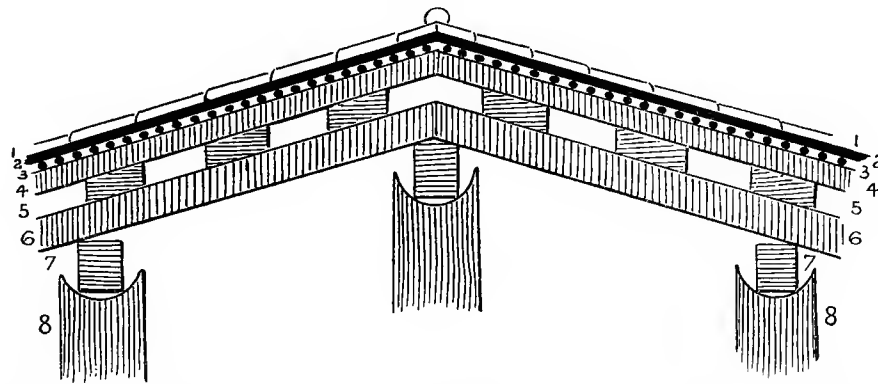


6. HUTS FOR WATCHERS OF CROPS, PLACED UNDERNEATH AND IN BRANCHES OF A TREE.

wood and mud. This coping answers the purpose of broken glass or spikes. The upper stories at Tazaïrt overhung the lower by a foot or more (cf. Plate X. 3), and were carried on stout joists or cross beams. Many of the walls in this exceptional village were ornamented by round-headed inset arches with columns and capitals, and decorative loopholes constructed with tiles.

At Gelaa the type was more normal, and nearly all the houses were simply single ground-floor rooms. For the most part the walls east of the Wed Sahel were left plain; to the west they were almost always coated with whitewash.

At the village of Chellata were a few thatched houses, but these too were exceptional; nearly every edifice, whether tomb, mosque, or house, being uniformly



SECTION (not to scale) TO SHOW THE CONSTRUCTION OF A KABYLE ROOF AT TAGAMUNT AZUZ.

covered with red semi-circular tiles laid on laths in the same way as in the houses of the French colonists.

The walls, save for the timber-course, are much the same as those of the Chawía, and are built in the same way with the aid of the same clumsy hammer. It is in the construction of the roof that the Kabyle house is fundamentally different from the Chawía.

At Tazaïrt were one or two instances of "crutch" roofs, but we saw them nowhere else. In general the Kabyle roof is carried on forked uprights. If no fork exists, a solid log is cut at the top in such a way that the superincumbent timbers cannot fall off.

In the accompanying diagram, which needs little further explanation,

- 1 is the outer skin of red tiles,
- 2 the laths on which they rest,
- 3 a packing of reeds,
- 4 small rafters,

- 5 small longitudinal beams,
- 6 the main rafters,
- 7 the heavy longitudinal beams which rest on
- 8 the solid uprights which carry the whole weight of the superincumbent mass.

It will be observed that

(1) There is no ridge-pole—its absence is a common feature in old houses in some parts of England.

(2) There is no tie-beam of any sort.

With regard to the absence of the tie-beam, it may be remarked that most of the stress of the very low pitched roof is diverted by the subsidiary uprights from the tops of the walls. But even were there no such auxiliary piers, the walls are so solidly constructed that they would probably bear the great thrust of the roof without the aid of buttresses or tie-beams.

The interior arrangements of a typical Kabyle house are nearly as simple as those in the houses of the Chawia; in fact, in all minor details of equipment they are practically identical. There is, however, this important difference. In the Kabyle house the room (which may be 30 feet long $\times$ 15 feet wide $\times$ 12 feet high) is divided by a wall into two portions, one of which is at a much higher level than the other. In the higher compartment the family live, sleep and eat; in the lower beyond the wall are stabled the domestic animals. The party wall itself is frequently pierced with arches so that the pen is ventilated into the main room; upon it and above the stable are usually placed the curious clay granaries shown in Plate VII. 3. There may be three or more of these*; the family supply of corn and dried figs is kept in them, and they are ornamented with strange designs, which sometimes resembles the forms of Kabyle jewellery, while another favourite device is the hand.

In one corner of the room is probably an amphora of olive oil set upon a stand (cf. Plate VII. 4); there may or may not be a loom. The white surface of the plastered wall is often painted with rude frescoes in red, representing animals, trees and men; these can just be detected on the wall in Plate VII. 4. Mats do duty for beds. The fire is usually put in a round hole in the ground, round which are placed three stones to support the cooking vessel. The doorways are sometimes covered by porches which are simply continuations of a portion of the roof. Such porches are

* At Gelaa their place is taken by huge plaited vessels, like those to be seen at El Arbaa in the Aurès.

carried by ornamented struts,* and the doors themselves are well made and decorated with by no means inartistic patterns (Plate VI. 4).

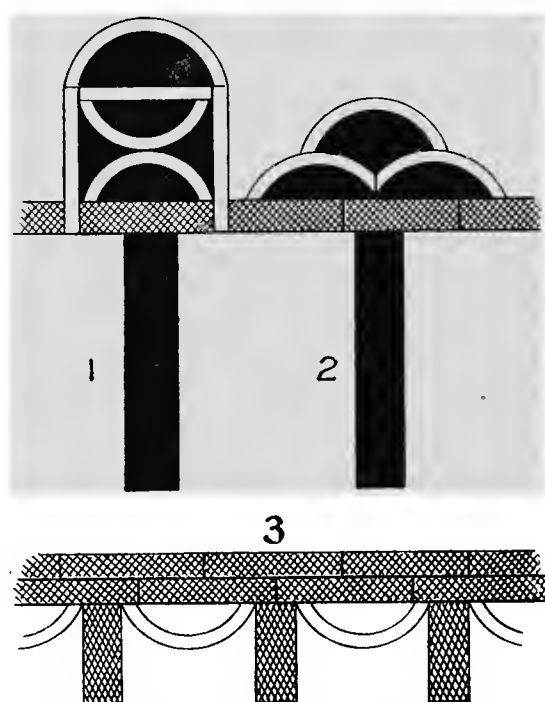
On the eastern side of the Wed Sahel, and especially at Tazaïrt and Gelaa, much use is made of tiles to form ornamental windows and ventilating shafts. As will be seen from the above types, these apertures are not much like those of the Chawia houses; though some of the simpler kinds are naturally found in both districts.

In Figs. 1 and 2 the black areas are the windows proper, the cross-hatching represents brickwork, and the space left blank is the stone wall.

In Fig. 3 the brickwork is again cross-hatched, but there is no aperture, and both the setting of the panels and the interior of the tiles are filled with mortar or cement.

It may be added that these "windows" are as common (or commoner) in the centre of the village as in the exterior walls; from which it appears that they were not specially designed as loopholes for bowmen or gunners, though they might well have proved useful in the event of a siege.

The modern Kabyle house must almost certainly be a comparatively recent introduction from some European source. As has been remarked in dealing with the Chawia houses, it is possible that the older dwellings are represented by the huts which abound in the vicinity of the villages. These huts are round and have no centre-pole in the interior. The roofs are formed by attaching the lower ends of boughs to the top of the side wall, their upper extremities being fastened together at the top. All are made of logs or branches and strengthened with vines or nets; a very low door closed by a slab of wood is the only means of entrance or exit. Being thatched with hay or straw they are sufficiently water-tight for their purpose, whether it be to shelter the owners of the crops or to protect the stored corn. In Plate VII. 6 are shown two of these huts (cf. Plate VIII. 5),



WINDOWS AND TILE-WORK IN THE WALL OF THE
KAÏD'S HOUSE AT TAZAÏRT.

* We saw none of these east of the Wed Sahel.

one beneath and one in the branches of an ilex about fifteen feet from the ground ; the second of the two was obviously only used as a look-out station.

Cemeteries.

Outside the village is the cemetery (Plate VIII. 5), with graves which are roughly outlined with natural unworked slabs set on edge along the sides and with a head and foot stone. Often but not always they are covered in with a top slab,* which gives them an appearance much like those in ordinary English churchyards.

The grave of a marabout is more elaborate, often approaching rather the dimensions and form of a chapel. Such graves vary in style ; one is shown in Plate VIII. 3, 4. It was close to an ordinary cemetery, and consisted of an enclosure about 20 feet x 15 feet surrounded by a low wall outside which at the south end were two fine Aleppo pines. In the south corner of the enclosure stood a little shed about 4 feet high, inside which were rows of little oil lamps and a pan of charcoal, nothing else. Between the shed and the south-east boundary wall lay a human femur and tibia ; in this wall was a doorway filled up with thorn bushes to keep out intruders. Just outside the doorway was a tree hung with shreds of clothing, the relics of pious pilgrims. On several occasions we came across trees similarly hung with rags, recalling a practice which has prevailed in many parts of the world, and even in the British Isles.

* Graves in the Aurès are similar in style but often made less carefully with small irregular stones. In neither district was there any trace of a survival of a dolmen type or of any arrangement of the stones in a circle. Some of the southern Berbers, however, are said to "still build tumuli with stone circles of upright slabs," Ratzel, *Hist. of Mankind*, vol. iii. p. 272. They are the Kelowis of Arjijo. Ratzel does not clearly state his authority for this remarkable piece of information, but it is evidently Von Bary. Probably he is referring to the following passage of Von Bary's journal which, it will be seen, does not justify the inference he draws from it :—"Zur linken unseres Weges bemerkte ich auf einem Hügel mehrere Ruinen von Grab-Tumuli. Ich ritt vom Wege ab und fand innerhalb des früheren Tumulus, von dem gegenwärtig nur noch ein Kreis der untersten Steine übrig ist, zwei wohlerhaltene Kammern, die von Steinplatten gebaut waren und offenbar früher Leichname in kauender Stellung zusammengebunden erhielten, denn sie sind ziemlich quadratisch und so eng, dass in keiner andern Stellung ein menschlicher Körper darin Platz finden kann. Die Tuareg erzählten mir, diese Begräbnissweise sei bei ihnen Sitte gewesen bis zur Einführung des Islam." (*Zeitschrift der Gesellschaft für Erdkunde*, vol. xii. p. 177.) Any significance that the last sentence might be supposed to possess is discounted by the traveller's later entry in his journal :—"Ich frug denselben Mann über die *Eddebeni* und er behauptete, es seien keine Tuârik darin begraben ; es seien vielmehr Gräber aus der Vorzeit Air's und sehr alt" (vol. xv. p. 377 ; cf. also vol. xv. p. 230 and p. 236).



1. VIEW OF GELAA.



2. STREET IN TAZAÏRT.



3. MARABOUT'S TOMB AND TREE HUNG WITH RAGS.



4. THE SAME MARABOUT'S TOMB, SHOWING INTERIOR.



5. VIEW NEAR TAGAMUNT-AZUZ, SHOWING NATIVE CEMETERY AND SHEDS.



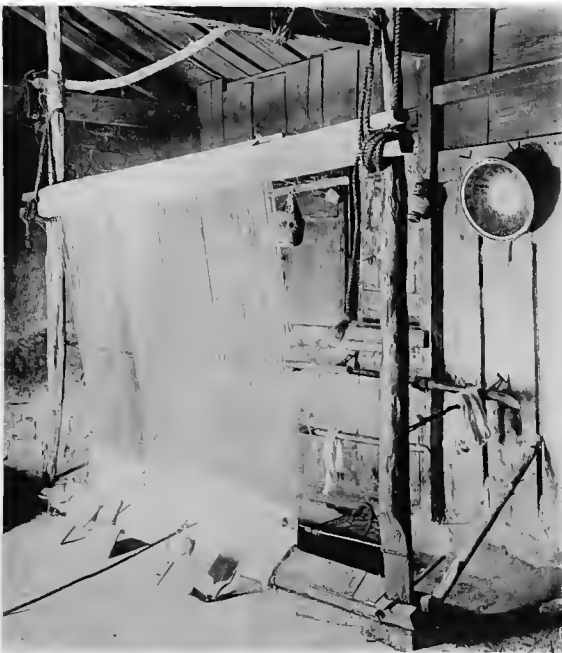
6. WOMEN DRAWING WATER.



1. WOOL-CARDING, THE FIRST PROCESS.



2. WOOL-CARDING, THE TWO PROCESSES.



3. LOOM, AND ALL THE OTHER INSTRUMENTS OF WOOL MANUFACTURE.



4. PLAYING DRAUGHTS IN THE STREET.



5. THE MOSQUE—TAOURIRT-MOKHRÂN.



6. THE BATH HOUSE—TAOURIRT-MOKHRÂN.

CHAPTER VIII

KABYLE INDUSTRIES

AGRICULTURE—MAKING OF OLIVE OIL—WEAVING—SILVER-WORKING—WOOD-CARVING—
IRON-WORK

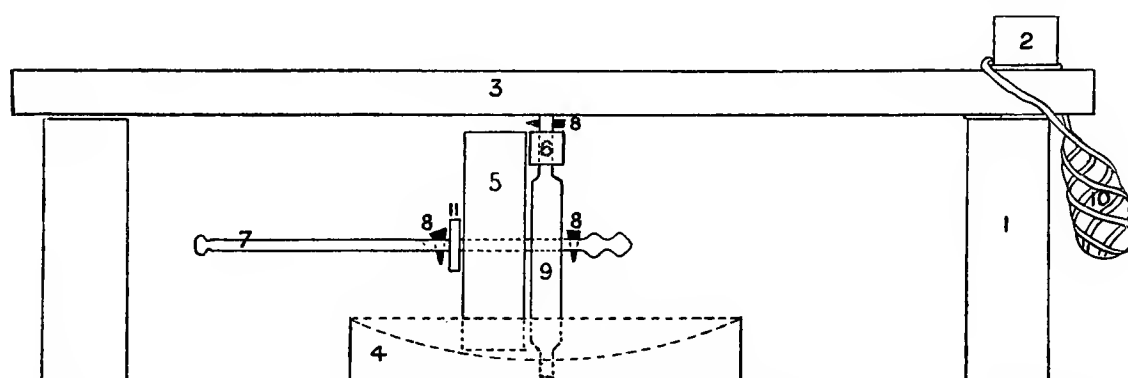
AGRICULTURE and the making of olive-oil are the two great industries of the Kabyles. *Agriculture.* Their country (much of which in fact resembles parts of northern Spain) is cultivated with the same extraordinary care that the Catalans devote to theirs. However steep the slopes may be they are tilled, if not with the plough at least with the hoe. A considerable amount of science is shown in their methods, manure being freely used and especial attention given to the proper rotation of the crops. The arrangement of terraces practised by the Chawía is not found here ; it is a system which was evidently evolved to meet the special conditions prevailing in the Aurès valleys. Irrigation again, on which almost the entire cultivation in the Aurès depends, is naturally little practised in Kabylia, where the configuration of the ground is so different as frequently to render it impossible. The chief crop is barley ; peas, beans, lentils, and vetches are also grown.

The Kabyle plough is almost identical with that used by the Chawía (see Chap. *The plough.* V), except that it has been rendered much more useful by being shod with an iron point. The plough is drawn by oxen (Plate X. 4).

The mills used for grinding the corn are the same as those used by the Chawía, *Mills.* viz. the quern and the watermill (see Chap. V).

The production of olive-oil demands a special notice. We saw only one method in use, unfortunately that which is certainly the most modern, viz. the grinding of the olives in a mill worked by a mule and the extraction of the oil by a screw press. Plate X. 1 shows the mill and press of which the subjoined diagram gives the component parts.

The olives, in a dry condition, are laid out near themill on mats or in any convenient receptacle. The mill (*irghis*) consists of the following parts :—Two heavy piers of rude masonry (1, *tharóst*) carry the heavy beam (3, *uzhgu*), through the centre of which is shipped the axle (9, *sári*). The lower end of the axle rests in the middle of the concave trough (4, *el hódhe*); which is generally constructed of rough stones and cement, with a sufficient curvature to keep the olives well under the grindstone (5, *el māsara*). The grindstone is supported by its lower edge which is in contact with the bed of the mill, and by the shaft (7, *ethbäe*), which passes through its centre and through the main axle. To the longer end of this shaft is attached the mule or other animal that supplies the motive power; the shorter end is carved ornamentally and the whole is kept from being drawn out of the grindstone axle by the addition



KABYLE OIL-MILL AT TAZAÏRT (not to scale).

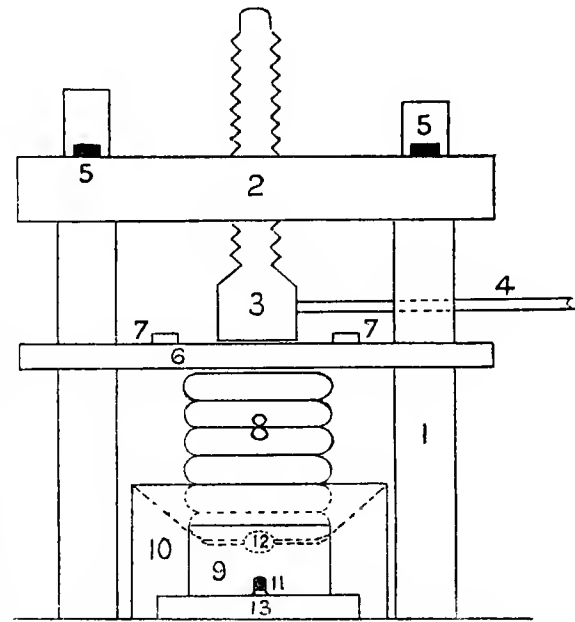
of the keys (8, *thakheleth*); the small wheel (11, *thashirnanth*) serving as a washer. Similarly, the axle key serves to keep in position another wheel (6, *themhireshth*) the function of which is to maintain the grindstone in the perpendicular position from which the curvature of the bed tends to deflect it. It will be observed that the axle is cut down to a roughly circular form at top and bottom, otherwise it would not be able to revolve with the shaft and grindstone. In the middle it is left of its original size in order that it may not be materially weakened by the insertion of the shaft. The grindstone does not exceed five or six feet in diameter by a foot in thickness. It has two separate motions. As the mule walks round, it turns with the shaft in a horizontal direction, and at the same time revolves very slowly on its own proper axis.

An attendant keeps the olives under the grindstone with a wooden shovel (*elūah*), pouring on to them at intervals small quantities of water. The mule may wear over the eye next to the machinery a blinker of basket-work (*ekhimbil*) which prevents it from becoming frightened or giddy.

The heavy beam 2 (*thakokenth*) serves only to keep the *uzhgu* in position, and a rope-bag, full of stones (10, *theshbekhth*), assists in the same way.

When the olives have been sufficiently crushed they are packed as tightly as possible into flat round baskets (*thekfashi*), which have a small hole in the top scarcely large enough to admit more than a handful at a time. The baskets, as they are filled, are put one upon another under the press, and the extraction of the oil begins.

The press is supported by two sturdy wooden uprights (all the parts are of wood) —1, *thizhdath*—the beam 2 (*thakokenth*) resting upon them. In some cases the uprights are morticed into the cross-beam and secured by pegs, 5 (*thakhelelth*). The screw and pressure-block may be of one piece (3, *moghzel*), the latter part having two holes bored right through it for the insertion of the lever (4, *aghzel*). The stout board 6



KABYLE OLIVE-PRESS AT TAZAÏRT (diagrammatic).

(*elúah*) is shaped somewhat like a butcher's tray, the ends being supported when the press is open for the reception of the baskets of olives by ropes fastened to the top beam, and it is further strengthened by cross-pieces, 7. The bed of the press consists of two parts, 10 and 9, though it has but one name—*tharvuith*. The higher part (10) is surrounded by a rim of considerable depth, and has a sufficient slope to allow the oil to drain through 12 into the lower basin 9; from the spout of which (11) it escapes into a shallow wooden platter 13, also called *tharvuith*.

The pressure board (*elúah*) prevents the downward thrust of the screw from being diverted laterally, and thus the whole of the force applied at the lever is employed in pressing out the oil. From time to time the press is tightened up, until the contents of the baskets seem to be exhausted. The big platter is then emptied into a goat-skin bag, or poured by means of a plaited string funnel (*inífif*) into a large two-handled, green-topped jar (*kus*). The olives, from which all the oil is now nearly extracted, may be used as manure; or they may be subjected to a washing in basins cut in the bed of a stream, where the last vestiges of the oil are skimmed from the surface of the water.

The Mill and Press, from which these illustrations and description were made,

were situated at Tazaïrt ; but, so far as we could see, neither the machinery nor the methods employed elsewhere differed from those here detailed in any essential feature. The origin of this Mill and Press is a question of some interest. They are certainly not of purely native invention, neither do they seem to be directly descended from the Roman model.* There is apparently no record of their being introduced from Europe ; probably, however, they were derived either from France or Spain at no very remote period, in which case their genealogy is ultimately traceable to Rome though in an indirect line.

Hanoteau and Letourneux mention two other methods of oil-making. The first of these is clearly the original native process ; in it the olives are simply placed on a flat rock and ground against it by an oblong stone which is pushed to and fro by the women, one at each end.† The other method is employed with those olives which, owing to the inferior conditions of their growth, have to be treated while still fresh from the tree ; these being soft, have water poured over them and are trodden out by the women.

The basins shown in Plate X. 2 are used at the conclusion of any of these three processes. In them the residuum of the oil is washed out from the already thoroughly crushed olives. They are constructed in a convenient place beside a spring, the water of which supplies them when they are needed for use.

Weaving. The methods employed in the manufacture of woollen clothes are precisely the same as those which exist among the Chawîa, but a detailed notice of the loom which is used in both countries has been deferred till the present. The whole of the work is done by the women. In Plate IX. 3 may be seen all the implements which are used, viz. the distaff (*taroka*), the spindle (*thazenarth*), the wire brushes (*aḳardash*) for the finer carding,‡ the comb (*thaiyazilt*) for pressing down the woof (*adraf*), and finally the loom itself (*axto*).§

The loom is of the vertical kind. Two uprights (*tirigli*) are fastened to the wall, floor, and roof so as to ensure sufficient stability. A heavy cross bar (*afgäg*) is then pegged down with wooden pins (*thazkwarth*) to the bottom of the loom, and the ends

* On Roman oil-mills and presses, see J. L. Myres, *Proceedings of the Society of Antiquaries*, II. xvii. 280 (19th Jan. 1899).

† This we never saw, and suspect it is rapidly disappearing with the increase in the number of mills. It is a method very similar to that which is used in Tripoli.

‡ See Plate IX. 2 for the way in which these are used. The rough carding is shown in Plate IX. 1. It was impossible to take a photograph of a woman engaged in the work which is the reason that a man is shown doing the carding, though it is really done by the women.

§ *ἰσίδος*?



1. OIL MILL AND PRESS.



2. BASINS FOR THE FINAL WASHING OF THE PRESSED OLIVES.



3. STREET IN A KABYLE VILLAGE—IGHIL ALI.



4. OXEN AT THE PLOUGH.



5. POTTERY MAKING AT TAOURIRT-MOKHRÂN.



6. POTTERY MAKING AT TAOURIRT-MOKHRÂN.

of the warp are made fast to it ; its structure allows of its being revolved by hand for as many turns as may be necessary to keep the growing portion of the fabric at a convenient level for the operator as she sits behind. At the top is a similar *afgäg* which may be raised or lowered at will by tightening or loosening the ropes by which it is secured in position ; to this the tops of the warp are attached. The warp (called *azto* like the whole loom) is decussated by means of a horizontal rod (*audîr*) and leashes (*ilm*) ; two other rods (*âghanim*) are employed to keep the warp tight and to separate its threads. There is also a clasp and string (*thazpat*) attached to the side post and to the fabric, to preserve its shape and to keep up the requisite lateral tension.

It is very remarkable that, in spite of possessing such an excellent loom, the Kabyle and Chawîa women do not use the shuttle at all. The woof is passed by hand from right to left, pressed down with a bodkin and thrust home with the comb.

Kabyle jewellery is very similar in class and kind to that of the Chawîa (cf. Chap. Silver-working. V). A typical set of ornaments is shown in Plate V. 4. The work is more showy than that of the Aurès silversmiths, the ornaments larger and of less pure silver. Coral is often replaced by paste, with which it is easier to make the enormous bosses that the natives admire. In villages that are within easy reach of French settlements, European models and designs are fast being introduced.

The doors of many Kabyle houses are ornamented with carved patterns (Plate Wood-carving. VI. 4) ; this industry is peculiar to certain villages. The best wood-carving that we saw was in Tazaïrt. The workmen here were extremely skilful, but their productions were too much influenced by European models to be of great interest ; some were curious, being apparently imitations in wood of sixteenth or seventeenth-century Spanish or Italian weapons. It is said that the Kabyles were very expert in the manufacture of genuine weapons of war until this was stopped by the French.

The Kabyle smiths are excellent. At Tagamunt-Azuz we saw some well-con- Iron-work. structed forges furnished with two varieties of large bellows. All sorts of iron-work are produced ; good knives are made and toothed sickles.

Other Kabyle industries are the preparation of leather, the making of wax from the products of their numerous beehives, and the manufacture of pottery, to a description of which the next chapter is devoted.

CHAPTER IX

DETAILS OF THE MANUFACTURE OF KABYLE POTTERY

POTTERY amongst the Kabyles, as amongst the Chawia, is all manufactured by the women, and is all made by hand without the use of the wheel. We studied the processes in detail at several places, especially at Taourirt-Mokhrân (Plate X. 5, 6), about two miles from Fort National, and at Tagamunt-Azuz (the whole of Plate XI.), among the Aït-Aïssi ; and brought back specimens of the clays, pigments, and brushes, as well as of the pottery itself.*

The clay is a compound of two very coarse earths which are wetted and mixed together, pulverised pieces of old broken pots being further added to the compound to give firmness.

How a pot is
formed.

The first stage in the manufacture is the kneading of the moist clay with the hands (Plate XI. 1, right). It is then made into rolls (Plate X. 5, left), which are placed one on the top of another as needed upon the round platter which serves as a base. Next the clay is fashioned with the hand till gradually the desired shape is obtained, strips being added from time to time as more clay is needed to bring it up to the requisite height. Then the superfluous clay is removed from the outside and the surface is smoothed with a small scraper of flat wood. If the pot is of ordinary dimensions its form is now complete and it is left on the platter to dry (Plate X. 6). If, however, it is unusually tall like that shown in Plate XI. 1, it must be left to harden before being carried up to the full height, as the soft clay will not bear the weight of the entire superstructure ; in such a case it is left on one side and another is begun ; the first will not be finished until it is sufficiently dry to bear the addition of more strips.

The form of the pot or platter being now complete it is left to dry, the processes

* These and all other specimens that we brought back from Algeria have been deposited in the Pitt-Rivers Museum at Oxford.



1. BUILDING UP A POT WITH STRIPS OF CLAY.



2. PAINTING RIM WITH RED, AND GRINDING PIGMENTS.



3. PAINTING THE INTERIOR WITH A FINE BRUSH.



4. BURNISHING AN UNPAINTED POT WITH PEBBLE, AND PAINTING INTERIOR.



5. FIRING THE POTS IN THE OPEN AIR.



6. FINAL STAGE, RUBBING WITH A YELLOW RESIN WHILE HOT FROM FIRE.

of decoration will take place the next day, or as soon after the drying as the operator has leisure to begin.

Before it is painted the pot must be burnished. This is done with a pebble after moistening the surface of the dry clay with water (Plate XI. 4, left). How it is decorated.

The painting is done with little brushes, one of which is very coarse for laying on broad washes, while three finer ones of graduated thicknesses are used for putting in narrower bands and patterns. The colours used are three only, viz. red, white, and black (cf. Frontispiece) obtained from raw lumps of native earths of which the analysis is given below. These are ground with water on a stone (Plate XI. 2, right).

The platter which the girl is shown painting in Plate XI. is that which is drawn among our types as No. 3 in Plate XII.; it may serve as an example from which to enumerate the stages in the painting. Its colouring is the same as that of the platter shown in Frontispiece 1, and the patterns are very similar. First the inside was smeared all over with white, then the rim and centre were painted with red.* Next the inner lines, chevrons, cross-hatchings, and chessboardings were put in with a fine brush in black and red; this stage has just been arrived at in Plate XI. 3, and is shown a little more advanced in Plate XI. 4 (right). The painting was finished by putting in the white lines on the red rim and on the inner red panel which is near the centre.

The pot is next fired. This can be done immediately after the painting. A heap Firing. of wood is made in the open air and the pots are put in the middle and covered over loosely with the pieces, not of course so closely as to limit the access of air. The wood is then set on fire. This whole process (Plate XI. 5) takes about twenty minutes.

Lastly the pots are taken, while still hot, from the fire and rubbed over with the Varnishing. yellow resin of some coniferous tree. This has the effect of varnishing and of fixing the colours. To our eyes, however, it spoiled the appearance of the pot by turning all the part of the field and pattern which had previously been bright white to a light yellow. A few pots are spared this treatment and the white remains in its natural state, but they are the inferior specimens. One such is shown in Frontispiece 3.† It came from Taourirt-Mokhrân, where we saw it made, and it is a distinctly inferior specimen; the colours not being varnished will rub off with handling.

The specimens of the colouring matters which we brought back were analysed Composition of the colours. with the following results :—

* In another case a second burnishing was given after the red had been put on.

† To which, however, in our reproduction it has been necessary to give a slight yellow tinge to distinguish it from the white of the paper.

The white is a "marl" composed of

Silica	.	.	.	.	.	.	.	70 per cent.
Alumina	.	.	.	.	.	.	.	18.5 „ „
Water	.	.	.	.	.	.	.	5.6 „ „
Calcium carbonate	.	.	.	.	.	.	.	4.5 „ „
Magnesia	.	.	.	.	.	.	.	1.2 „ „

Traces of soda and of potash.

The red is a "ferruginous clay" composed of

Ferric oxide	.	.	.	.	.	.	.	42.4 per cent.
Alumina	.	.	.	.	.	.	.	9.1 „ „
Silica	.	.	.	.	.	.	.	48.5 „ „

Traces of magnesia.

The black is an "iron ore" composed of

Ferric oxide	.	.	.	.	.	.	.	88.4 per cent.
Alumina	.	.	.	.	.	.	.	3.4 „ „
Silica	.	.	.	.	.	.	.	7.8 „ „

Traces of magnesium and sulphur.

CHAPTER X

COMPARISON OF KABYLE AND EGYPTIAN POTTERY

THERE was little in the work and products of the Chawía to suggest any close relationship with early Egypt. This is hardly to be wondered at when it is remembered that they have no art sufficiently developed to serve as a basis for comparisons. Kabyle work offers a more promising field for inquiry ; for their pottery, which is the chief manifestation of such art as they possess, is incomparably superior to that of the Chawía and exhibits forms and designs which are at once distinctive and characteristic. On the other side the prehistoric cemeteries of Egypt have yielded so many hundred different types of pottery of various classes, that there exists a sufficient mass of material to amply justify the comparative study that we are about to attempt.

Kabyle pots may be grouped under six headings, which do not constitute a scientific division but facilitate treatment for the present purpose. They are as follows :—

- (1) White or light-yellow decoration on a red ground. This style is combined with that of (5) which, however, occurs frequently by itself.
- (2) Red decoration on a white ground.
- (3) Black decoration on a white ground.
- (4) Red ware with very little ornamentation.
- (5) Black decoration on a yellow ground.
- (6) Pots which are quite plain and undecorated.

The first of these classes is by far the most important in relation to prehistoric Egypt. Ware of this kind is manufactured in Kabylia west of the Sahel, chiefly among the Aït-Aïssi in the administrative district of Fort National. Of the examples given in our plates those which are seen in Frontispiece 1, 2, 5, in Plate XII. 1, 3, and in Plate XIV. 5, 10, 12, 13 come from the villages of the Aït-Aïssi, while that in Frontispiece 3 is from Taourirt-Mokhrân, close to Fort National.

(1) White or light-yellow decoration on red ground.

The pot figured in Frontispiece 4 was bought at Ighil Ali. It was not, however, made there, but brought in the course of trade, as its owner told us, from the Aït Suleiman near Gergûl* (*i.e.* from the Kabylia of Bougie east of the Sahel).

The processes employed in the manufacture and decoration have been fully described in the last chapter. Here it is only necessary to recall that the pot is covered with a red wash obtained from a native ferruginous earth and then decorated in patterns with a native white earth. Frequently the makers are not content with this, but further decorate a large part of the field with designs in black, a feature which must for the present be left out of account.

The general resemblance of this ware† to the polished red pottery with white cross-lines which is found in the prehistoric cemeteries in Egypt (see in detail *Nagada and Ballas*, Plates XXVIII. XXIX.) is at once apparent (cf. especially our Frontispiece 4, with *Nagada and Ballas*, Plate XXVIII. 75, 76); and further the technique of the decoration is identical, if Professor Flinders Petrie is correct in his view that the ware which is found in Egypt was coated with red haematite and then painted in white patterns with gypsum. There is a slight difference in colour, owing no doubt partly to the slightly different proportions of the elements in the composition of the native colouring-matters respectively obtainable in the two countries. Thus the Kabyle ware is generally of a rather brighter and yellower red than the Egyptian, but the enormous difference in respect of antiquity must also be taken into consideration. In the course of over 7000 years the Egyptian ware may well have lost some of its brightness, and as a matter of fact some of the better-preserved pieces are even now of a warmer red than that in which they are depicted in our plate. On the other hand, the brilliant red of the freshly-made Kabyle pots tones down considerably with age. Thus whereas 1, 2, 3, 5 in the frontispiece are of the brighter shade, the piece numbered as 4, which was a good many years old, had faded and lost much of its brightness. Its colour where the glaze remains is not identical with the cerise-red of the Egyptian, but wherever the glaze has worn off and the original colour can be seen it has precisely the tint of the Egyptian ware; so much so that if a specimen of the latter be put beside it no shade of difference can be detected.‡ We have referred in the last chapter to the final glaz-

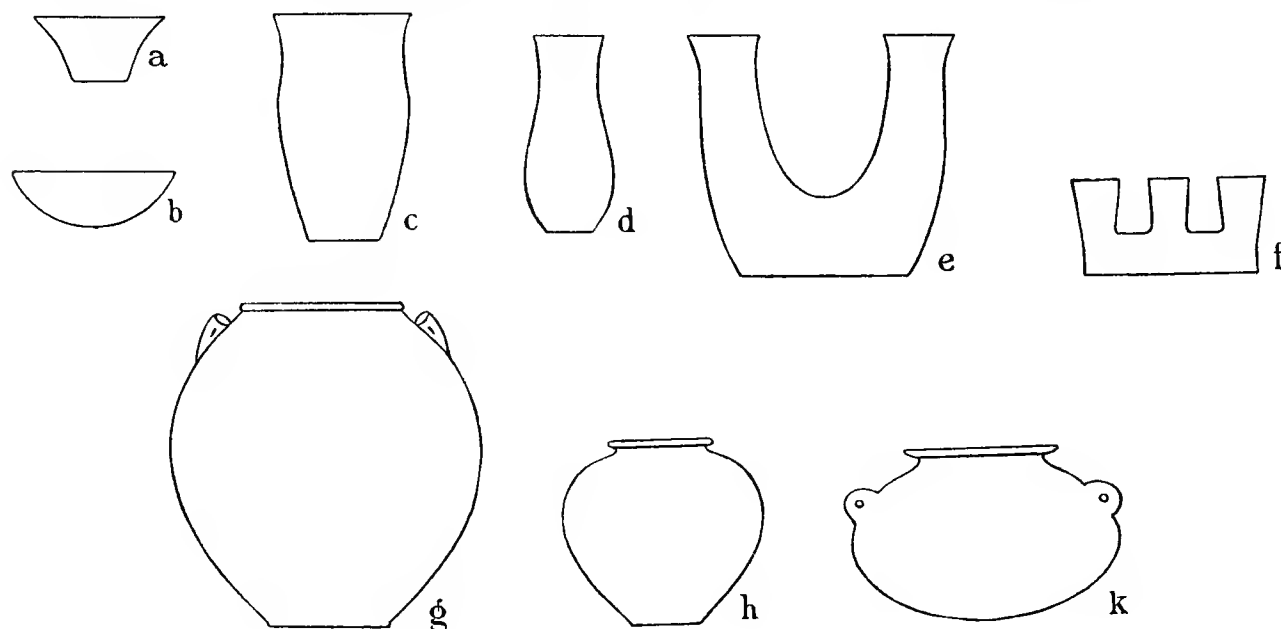
* This tribe is also said to manufacture the triple, quadruple, and multiple pots of similar form which are the types of Kabyle ware that most commonly find their way into collections. Such pots do not seem to be made by the Aït Aïssi, but the manufactures of both tribes are highly esteemed and widely traded over the country.

† We believe that Mrs. Eustace Smith was the first to call attention to the resemblance.

‡ In our plate the whole pot has been coloured of the shade which is shown in the parts where the glaze has rubbed off.

ing with resin employed for most though not all of this ware, which not only heightens the colour of the red but has the further effect of giving a slightly yellowish tinge to what were previously brilliant white lines.

In the detail as well as in the whole character of the patterning there is the closest resemblance between the Kabyle and the Egyptian. The zigzag lines are a favourite design in both (cf. Frontispiece 4 with Frontispiece 9); the latticed triangles may be seen equally in Frontispiece 1 and in Frontispiece 8; the simple chevrons of Frontispiece 6, 7 occur in Frontispiece 1 and in Plate XII. 1, and are of all patterns the most



characteristically Kabyle. The cross-barred line seen in Frontispiece 3, 4 is exactly matched by No. 70 in Plate XXIX. of the Nagada types, and the plain white barrings are amply illustrated in the same plate of the Nagada book.

Even in the shapes of the pots there is a considerable amount of resemblance as will shortly be shown. In Egypt the favourite forms are shallow trays, small shallow bowls such as *a*, small calyx-cups such as *b*, and high-standing jars like *c*, *d*, the units of which being combined evolve the form *e*, which in a more degraded type appears again as *f*. There is an important point to be observed in this connection, viz. that these are all small and simple forms in which ample swelling curves are not attempted. They are therefore exactly those which could be easily produced by such a process of building-up in strips as the Kabyles employ. On the other hand, they contrast sharply with the "decorated" class of prehistoric Egyptian pottery* which affects such forms as

* See *Nagada and Ballas*, Plates XXXIII. XXXIV. XXXV.

g, h, k. The latter might indeed be made by the same building-up process, but it would be by no means easy; and we suggest that for this class of "decorated" ware, which has no analogies with any Kabyle types, there was employed a process which is similarly unknown to the Kabyles, viz. that of beating out with a stone from the inside until the originally cylindrical shape which the pot assumed in its first stages is modified into something like a globe with bold ampulla curves.*

While the Kabyles undoubtedly use a considerable variety of shapes for their white-lined ware which have no Egyptian analogies,† yet some of those represented in the plates may well be considered to support our comparison. Frontispiece 2 is only a much enlarged variety of a polished red "New Race" pot, while Frontispiece 5 and Plate XII. 1 are "New Race" forms, though in Egypt they were not given the white-lined decoration. One whole class of pots corresponds very closely in the two countries even in respect of pure form. It is that which is represented in Kabylia by No. 4 of the Frontispiece and in Egypt by No. 6 of the Frontispiece and by the types *c, d, e, f*, which have been figured in the preceding paragraph. Such pots may be single, double, or multiple; the single unit is seen in *c* and *d*, but does not occur in the Kabyle examples, which are all compound. Finally the very use of multiple pots is peculiarly characteristic of Kabyle work, and the recurrence of such a marked peculiarity in the prehistoric Egyptian is not the least valuable corroboration of the theory that the products of the two countries have a common origin.

2) Red decoration
on a white ground.

The second of the classes into which Kabyle pots have been divided has no Egyptian affinities; under it are comprised Nos. 6, 7, 8 of Plate XIV. It is an attractive and apparently uncommon ware, the decoration being laid on in crimson on a brilliant white background. Our specimens were bought at various places, and we did not come across the seat of the manufacture. We were informed that No. 8 came from the commune of Guelma, and No. 7 was said to have come from near Constantine. Other specimens of this class were said to have been made in a very remote village of the Djurdjura in the commune of Michelet.

(3) Black decoration
on a white
ground.

Under the third heading come Nos. 1, 2, 3, 4, 9 of Plate XIV. and 21 of Plate XIII. The background in this case as in the last is of a brilliant white, but the decoration is

* It is the process observed by Professor A. C. Haddon at Port Moresby in British New Guinea.

† The use of the white decoration tends to be somewhat arbitrary. It is frequently an additional embellishment put on or omitted according to individual taste. Thus No. 11 on our Plate XIV. is not properly a white decorated pot, though a little white has been put on, almost as if by an afterthought, and similar pieces may be and actually are made without any white lines or dots.

not in red but in black, while the interstices between the designs as also the handle and the base are often coarsely smeared with "lûk" (*i.e.* what is apparently raw shellac). The designs, which unfortunately do not show well in the photographs, include the same elements that are to be noticed on the other classes of Kabyle pots, especially the fifth class. There are, however, one or two new variations; the most noticeable of which are the thin latticed braids which run in vertical zigzags down the high stem.

This ware shows no close resemblances to any known in prehistoric Egypt* but it has other connections of a highly interesting kind. It is absolutely identical in general effect, in technique, and in detail of ornament, with Cypriote ware, which is dated to about the ninth century B.C.† There can be no question that either Cyprus borrowed from Libya or Libya from Cyprus, but it is not easy to decide which country was indebted to the other. The variety of the shapes, some of which do not seem to occur elsewhere in Kabyle pottery, inclines us to believe that Cyprus invented and Libya borrowed; but on the other hand it is no great step from the white ware decorated with red, which there is no reason to suppose is not native Kabyle, to this white ware decorated with black. One thing however is clear; and that is that Libya had direct or indirect intercourse with Cyprus, at a date which may well be contemporary with the foundation of Carthage and earlier than that of the Greek colonies in North Africa.‡ There are some magnificent examples of this ware, the gift of Mrs. Eustace Smith, to be seen in the British Museum. It is apparently manufactured near the coast in the direction of Philippeville.

In the fourth group are included a very large number of pots,§ of which No. 24 (4) Red ware with very slight decoration. in Plate XIII. is the most typical example. The ware is generally speaking far inferior in beauty to any of the three classes which have just been described. It is widely distributed and affects a considerable variety of forms, from the very large water-vessels which are commonly carried about the country to such small vases as No. 20 in Plate XIII. The distinguishing characteristic of all the examples is the predominance of the red colouring; the surface is not glazed but is generally very highly burnished. The pigment is the red ferruginous earth native to the mountain districts; and the general

* We have sometimes thought that the motives and treatment of the Mediterranean black ware incised with white had influenced this white ware decorated with black; but the similarity of effect may be only a coincidence.

† See specimens in the first Greek vase-room of the British Museum and elsewhere.

‡ The exact date cannot of course be determined until it is known at what date this pottery disappeared from use in Cyprus.

§ Our collection contains only a few specimens, as for the most part the dimensions of these pots are such as to render their transport difficult.

process of treatment is no doubt that which we saw practised in one case at Tagamunt-Azuz ; that is to say the pot *after* (not during) the drying is remoistened with water and burnished with a pebble, then the red is laid on and the surface thus coloured is reburnished. The result is a brilliant polished face like that of the "polished red" ware of prehistoric Egypt, for which a similar process is supposed to have been employed. Indeed though red ware as such is by no means a distinctive product of any one country but quite the reverse, yet considering the very close resemblances of detail in the present case we think it may fairly be allowed to add its weight to the cumulative evidence of Berber-Egyptian connection. This ware then we regard as the Libyan representative of the "polished red ware" of prehistoric Egypt.

This red Kabyle ware, though its most typical examples are nearly, plain is not quite devoid of ornament. Thus No. 24 in Plate XIII. has a fret pattern which when combined produces almost the effect of a Maltese cross ; and such is the most usual style of decoration employed on the large red water-vessels. From this the more elaborate design in black on a red ground seen in No. 23 Plate XIII. is evolved.

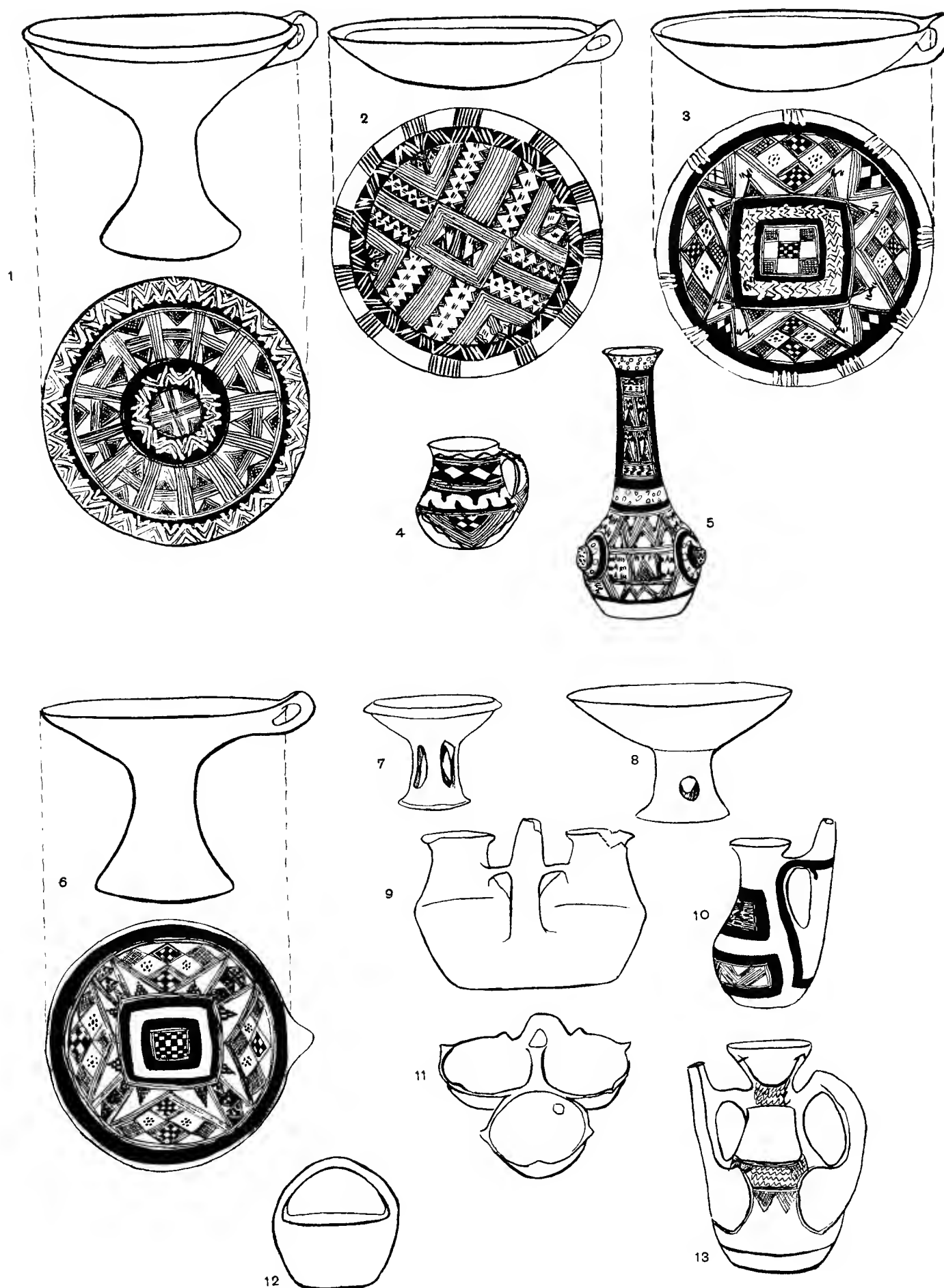
With this class may be considered several pots which cannot well be grouped under any other head, though they are too elaborately ornamented to be properly compared with Plate XIII. No. 24, which is the true type of the "Libyan polished red." Of these No. 13 in Plate XII. is a unique and very fine specimen, the field of which is made up in equal proportions of white and finely burnished red, while a scrabbled and latticed pattern in black is further laid over part of the white. Not unlike this in treatment are Nos. 17 and 18* of Plate XIII. though they are far inferior in finish, and the same may be said of No. 22 in Plate XIII. which is half white and half red with an ornamentation in vertical and zigzag black lines, and a single fret which may be compared with the double fret of XIII. 24.

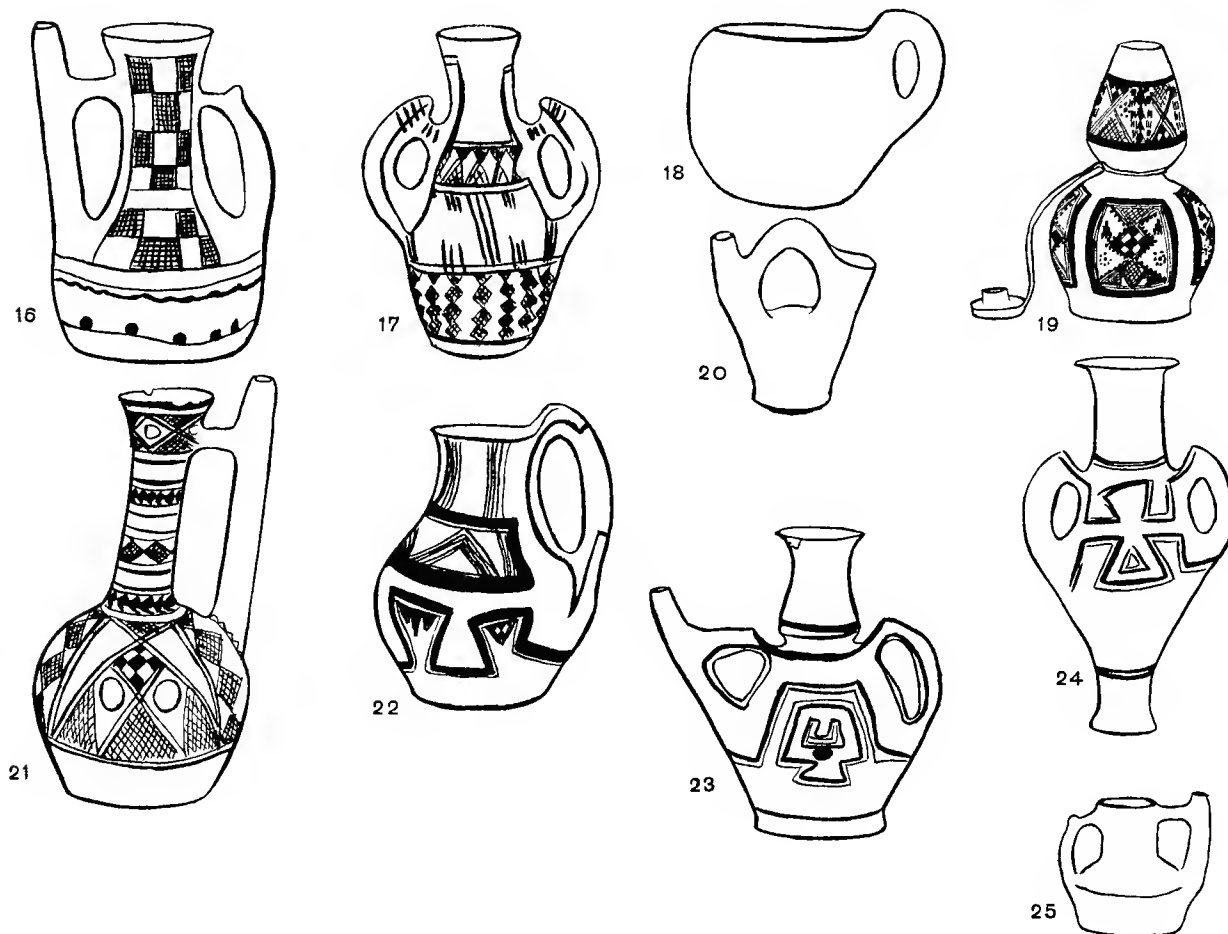
Of these specimens Nos. 17 and 18 of Plate XIII. were made at Taourirt-Mokhrân, and No. 22 of Plate XIII. was made at Tagamunt-Azuz ; of the remainder, two were bought at Ighil-Ali and two near Fort National.

(5) Black decoration on a yellow ground.

The fifth of our classes contains a very large number of pots, most of which are inferior in style to the finer wares. It is a somewhat miscellaneous group, and the division is so far unsatisfactory that it tends to overlap with the first class. Its characteristic, the decoration in black on a yellow ground, is one of the elements, as has already

* No. 18 of Plate XIII. is exactly matched in shape by a late "New Race" pot from Diospolis, now numbered as L 70 of the "New Race" types.







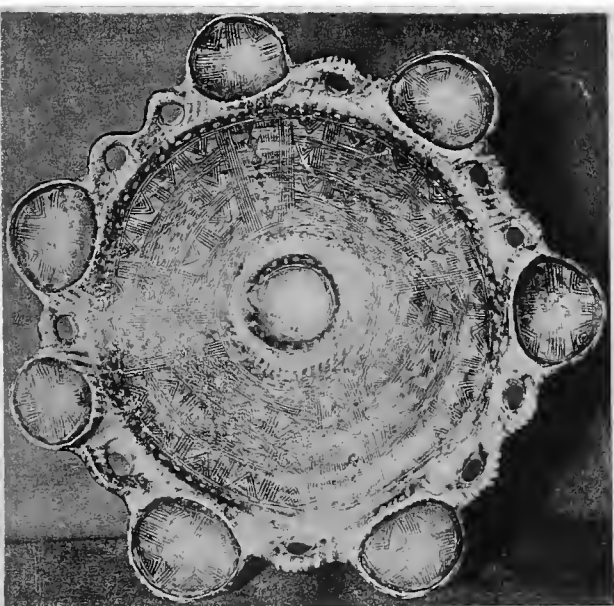
1

2



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13

been remarked, that enters into most of the specimens of the first class. What differentiates the latter from that now under consideration is the use of white line on the red ground ; and this is a feature which may or may not occur upon examples which are in other respects identical. Thus No. 9 in Plate XIII. falls into our fifth class ; but precisely the same form, only more highly finished, is frequently decorated with white lines and spots,* and it would then be included under our first class. Similarly the pottery table in Plate XII. 6 differs from XII. 1 in little except the absence of the white decoration. It is very much a question of the degree of elaboration in the finer pieces ; the best are ornamented with white, while the inferior specimens lack this addition.†

The quite common and rough forms are never given the white ornament. Some of them are almost or quite identical with those found among the Chawía ; save that the curious bosses, protuberances, and dentations in the clay disappear when colour is relied on to give the ornament. Such are Plates XII. 4, XIII. 2, 3, 4, 5, 6,‡ 13, 14, 15, all of which are distinctly inferior to such pieces as Plate XII. 2, 6, and Plate XIII. 9, though the necessities of classification have brought them under the same head. They represent a style which seems to be confined to no one locality, but to be generally distributed throughout the country. No. 19 in Plate XIII. is interesting as being obviously copied from a gourd (cf. the natural gourd hanging on the wall of the house in Plate VII. 4) ; it was bought in a village of the Beni Yenni near Fort National and had apparently been made there.

Many of the patterns on these pots are extremely interesting.§ It does not enter into our scheme to examine them minutely in the present volume, but we greatly hope that some of those distinguished anthropologists who have made a special study of the origin and development of ornament will turn their attention to Kabyle art.

Lastly, the Kabyles use a great deal of plain coarse ware, of which a few examples are given in the illustrations. Nos. 9, 11, 12 of Plate XII., and Nos. 1, 11, 25 of Plate XIII. are examples of this. The generic resemblance of this ware to that of the Chawía is very noticeable. It is evident that the potter's art had a common foundation in both

(6) Plain undecorated ware.

* As may be seen in the fine amphorae common in museums. These are not figured in our illustrations, but we saw them being manufactured at Tamaosht.

† Nos. 5 and 10 in Plate XII. are just on the border. They might or might not have the white ; as a matter of fact both have a slight decoration of white spots.

‡ In Plate XIII. Nos. 5 and 12 are the same specimen from two different points of view, and Nos. 7 and 10 are similarly two aspects of one pot.

§ One that is not shown in our illustrations is apparently derived from leather-work as in certain Cypriote examples. Others show the influence of basket-work.

districts, but in this as in other things the Chawia have been content to stand still while their Kabyle kinsmen were more progressive. Of these specimens No. 11 in Plate XIII. is interesting as being a puzzle pot like those which used to be and perhaps still are made in some parts of England; it has no opening on the top, but only a round hole underneath; it is difficult to believe that it is not a copy of some imported model. No. 9 in Plate XII. very closely resembles in form No. 40 in Plate XXVI. of *Nagada and Ballas*; and No. 12 Plate XII. is matched by C 65 of the types from Diospolis.

These coincidences of form naturally bring us to consider what, to an excavator familiar with "New Race" types, is perhaps the most striking of all the resemblances between Kabyle and prehistoric Egyptian pottery. In Plate XII. 6, 7, 8 are shown three varieties of pottery tables. The pottery tables of the "New Race" and early Egyptians are the most familiar of objects to every archaeologist. It is very remarkable to find them in everyday use at the present time amongst the Kabyles. But the resemblance goes farther than this. Not only are pottery tables as such common to Egypt and Kabylia, but all three of the types shown in our plate can be matched from the furniture of Egyptian graves. No. 6 is the normal form of pottery table with unperforated stem* of which an example was found in a "New Race" grave at Diospolis; No. 7, which has a stem pierced with oblong slits,† is as nearly as possible the type of No. 22 in Plate XXV. of *Nagada and Ballas*, a form which survives into Old Kingdom; and lastly No. 8, the stem of which is perforated with round holes, is absolutely identical with one of the new types found in Egypt since *Nagada and Ballas* was published, and now numbered as 86b of the "Late" New Race types.‡

Kabyle decorative
art.

The great characteristic of Chawia and Kabyle decoration is the prevalence of rectilinear patterns. This feature is illustrated above all by the pottery. In the silver-work, it is true, there occur curved lines and scrolls, which are used sparingly enough in the engraved designs but often in the outlines of the ornament (see Plate V). Again in the carvings upon the door-fronts (Plate VI. 4) rosettes and leaf-like motives may be detected. But it is very significant that none of these more developed styles of ornamentation are to be found upon the pottery. This is a fact of capital importance, and affords the most valuable corroboration of the view that we have here to deal with the survival of an exceedingly primitive manufacture. A people who use only rectilinear

* Made by the Ait Aïssi and probably elsewhere.

† Said to have been made by the Beni Wagag.

‡ It is no valid objection to our argument to say that red pottery with white ornamentation is found in South America and pottery tables in Japan. There has never been any idea of connecting these countries with Egypt, whereas the borders of Libya marched with those of Western Egypt.

designs are still in the infancy of decorative art ; most savages who have progressed at all beyond the first stages of aesthetic culture have developed from one source or another scrolls, maeander curves, spirals or circles. To realise how low Kabyle pottery stands in the scale, the reader need only turn to the first few pages of Professor A. C. Haddon's *Evolution in Art*, and note how many of the motives which occur in Kabylia are absolutely identical with those used by a very backward race of savages in Torres Straits.

We suggest then that not only the general technique but the whole style of ornamentation of this Kabyle pottery, proves that its makers are slavishly following out at the present day precisely those simple rules of art which were laid down by their prehistoric ancestors, and from which they have never departed. If this seems to be an extraordinary instance of conservatism, it will not appear at all incredible to those who have watched a Kabyle girl at her work using an older pot beside her as the model for all the patterns that she is painting upon its successor. Rectilinear designs might be perpetuated in this way for a wholly indefinite period ; their simple and rigid outlines afford no scope for that semi-conscious misinterpretation, which in other cases so often gives rise to numerous and wide modifications of a single original. The makers of the white-lined red pottery of prehistoric Egypt were similarly at the stage when rectilinear patterns dominated their art. It is true that some of their pots bear representations of giraffes and horned sheep treated in realistic style,* but designs such as those which appear in our frontispiece, zigzag, chevron and lattice, are by far the most common and are no doubt the earliest. These are what they left as a legacy to our Libyans, who have faithfully preserved them unaltered and unimproved to the present day. The Kabyle pots that are shown in the frontispiece of this volume were made in 1900 A.D. and yet it may be said that they are over 7000 years old.†

* Mohammedanism would have killed out any incipient tendencies of Kabyle art towards realism. In the ancient Libyan rock drawings found at Tiout and elsewhere animals occur frequently.

† One or two of the designs which appear in our plates call for special remark. Several of the pots show the influence of basket-work very plainly ; Plate XII. 1 is a good example, which will stand comparison with the Terramara basket copied by Professor Haddon in his *Evolution of Decorative Art* (Plate II. 9). Similarly the chess-boardings so frequent on these pots may have their origin in plaited work (cf. Haddon, *op. cit.* Plate II. 3). The silver pin in our Plate V. 4 looks very like a copy of the human face, and possibly several of the designs on the silver-work may have a similar derivation. The rose-like dottings occurring on many pots, e.g. Plate XII. 6, are characteristic of some late Mycenaean pottery. The so-called "mountain" pattern found on prehistoric Egyptain decorated pottery occurs everywhere in Kabyle work, where it has clearly nothing to do with mountains, but arises from a combination of the triangles which enter as units into almost all these rectilinear designs. In the central band on the stem in Frontispiece 2 is to be seen what looks like a legged creature, it occurs frequently, and may be an isolated instance of a zoomorph, viz. a lizard or bird, but its treatment is very angular and it may equally well be a development of the chevron. The occurrence of a true animal design, the camel, on the carpet in our Plate VI. 2, is, like the making of pots in the form of camels at Tamaosht, quite exceptional, and probably due to a recently borrowed idea.

CHAPTER XI

REVIEW OF ARGUMENTS IN FAVOUR OF THE LIBYO-EGYPTIAN CONNECTION

LANGUAGE—CUSTOMS—THE GODDESS NEIT—THE CARVED SLATES—PREHISTORIC SCRIPT— SUMMARY OF THE EVIDENCE

IN Chapter X. it has been shown that Libyan pottery as represented by its survival among the modern Kabyles, is so closely identical with that of prehistoric Egypt, in respect of technique, of style, of form, and of ornamentation, that it is only reasonable to infer the existence of a close connection between the two countries in the most ancient times. It is proposed in the present chapter to examine such other arguments as have been advanced in support of the same view. These differ greatly in value; we begin with such as are almost worthless and proceed with them in order of importance.

Language. The Libyan dialects belong to the family of Berber languages, some remarks on which have been made in the second chapter. The one point which can be regarded as fairly established with regard to these is that they are not Semitic. Whether the hieroglyphic language is or is not Semitic has been long debated; but the question may be regarded as finally settled now that the foremost linguistic Egyptologist of the day has given his verdict, after a period of hesitation which adds the greater value to his long-considered judgment.* The hieroglyphic language is Semitic and the Libyan languages are not.

But let it be remembered that hieroglyphic writing was unknown in Egypt in the earlier stages of the prehistoric period, those stages to which the term “prehistoric” should be properly confined to distinguish them from the proto-dynastic.† It is

* “Ich glaube mich daher keiner Übertreibung schuldig zu machen, wenn ich das Uraegyptische geradezu als eine Semitische Sprache bezeichne.” Adolf Erman, *Die Flexion des aegyptischen Verbums*, April 1900.

† Applying the term “proto-dynastic” to the first three dynasties.

plausibly suggested that it may have been introduced about the time of Menes. Even if it be conceded that the introduction may have been a little earlier, it is certain at least that the people who manufactured that white-ornamented red pottery which reveals the closest identity with the products of Kabyle art, were wholly ignorant of hieroglyphic writing. In the total absence, therefore, of documentary material it is impossible to decide what was the spoken language of the inhabitants of Egypt at that period. If it was the same as that of their successors, then at least it was not a Libyan language ; if it was not the same then nothing whatsoever is known about it.*

It has been alleged that a resemblance can be traced between the customs of the prehistoric Egyptians, particularly in regard to burial, and those of the ancient Libyans, but the evidence, when it is carefully examined, shrinks to remarkably small proportions. Four methods of interment prevailed in Egyptian graves of the prehistoric period. Burial customs.

(1) The bodies were apparently cut up before burial, and the bones were either scattered in various parts of the grave, or were replaced in something like their original positions, but frequently with the omission of certain pieces. There was no coffin.

(2) The bodies were not cut up but were buried in a more or less violently contracted position, the knees touching the chin and the heels touching the hips in the most extreme cases. No coffin.

(3) The bodies were buried in a pottery coffin in the same contracted position. (Very rare.)

(4) They were compressed into or under large jars. (Uncommon.)

Professor Wiedemann, who deals with this subject in M. de Morgan's well-known volume, *Recherches sur les origines de l'Égypte* (1897) says : "L'enterrement en position embryonnaire paraît avoir survécu dans quelques parties de la Libye," and gives Herodotus, iv. 190 as his authority. But the passage in question is perfectly explicit and runs as follows:—"All the wandering tribes bury their dead according to the fashion of the Greeks, except the Nasamones. These bury them sitting."† It is obvious that so far from supporting Professor Wiedemann's theory, the passage tells somewhat

* The alleged discovery of the syllables "Ra" and "Ah" in the composition of Libyan names is not a phenomenon of great importance. Even if the identity were fully established it would still have to be shown that it dated back to prehistoric times. But this style of derivation is notoriously dangerous ; and in the present case the authority is M. Halévy, whose conclusions are not universally accepted even by his own countrymen.

† The exact meaning of Herodotus may be illustrated from a passage in Richard Lander's *Records of Captain Clapperton's Last Expedition to Africa*, vol. i. p. 139. Speaking of the Borghoo people, who live a little north of the Bight of Benin, he says: "When a Borghoo man dies a pit is dug, either in his own house or very near to it, and the body is placed in a sitting posture, with the hands and feet tied tightly with cord, the head inclining upwards."

against it. It would be much more to the point to cite the fact that the contracted position is found in the interments in Algerian dolmens : * but even in this case no importance can be ascribed to the coincidence in Egypt and Algeria of a custom which has prevailed in early times over a great part of the world. The contracted burial is characteristic of prehistoric races in general, but of no one race in particular.

Again, Professor Wiedemann says (referring to Diodorus Siculus, v. 18)† “ Dans les îles Baléares qui étaient reliées à la civilisation libyenne, on frappait sur le cadavre pour lui donner la plus petite dimension possible et on l’ensevelissait dans une vase.” This is certainly a point of some importance, the bearing of which is not upon the first but upon the fourth of the methods described above. But it has to be remarked first that the burial in large pots is rare in Egypt, occurring at a comparatively late stage in the prehistoric period, so that it can hardly be regarded as characteristic ; and secondly that the custom though recorded in the Balearics is unknown in North Africa. If, therefore, there is any value in the argument, it suggests a connection of early Egypt, not with Libya in the true sense, but with the islands and the mainland of Western Europe.

Theories, however, which seek to prove connections of race or culture from such slight evidence, are dangerous in the extreme ; as M. de Morgan’s own comparisons sufficiently indicate. The very fact to which he refers, that burial customs analogous to those enumerated above are known to occur in many parts of the world, deprives them of any appreciable value as evidence of inter-tribal connection. If no more discriminating logic is to be used than the authors of these arguments employ, it might plausibly be contended that the prehistoric Egyptians must be identified with the Andaman Islanders, who are said to bury their dead in a sitting posture, or with the Patagonians, who are said to postpone the final interment till the flesh has dropped off the bones.

After what has been remarked in this connection, it is needless to enter upon the subject of tattooing. It is a world-wide practice, and its mere existence affords no ground for any further inferences. The analogies observed between the tattoo-patterns of prehistoric Egypt, and those of Libya, have been implicitly dealt with in our section on Berber ornamental art.

* See below, Chap. XII.

† Diod. *Hist.* v. 18, ἴδιον δέ τι ποιούσι καὶ παντελῶς ἐξηλλαγμένον περὶ τῆς τῶν τετελευτηκότων ταφῆς· συγκόψαντες γὰρ ξύλοις τὰ μέλη τοῦ σώματος εἰς ἀγγεῖον ἐμβάλλουσι καὶ λίθους δαψιλεῖς ἐπιτιθέασιν. Perhaps it would not be fair to lay too much stress on the first words ; but it must be remarked that Diodorus seems to have thought the practice unique.

It has been frequently stated that Neit was a Libyan goddess.* If this very important deity (the mother of the Egyptian gods and especially of Ra) could be shown to have been originally derived from Libya, it would be a valuable argument in favour of the early connection of that country with Egypt. It is worth while therefore to review briefly the evidence on which the statement rests.

It was no doubt the remarks of Herodotus, in his second and fourth books, that first gave rise to this theory. In his account of Sais, Herodotus has much to say of the Egyptian "Athena"; and there can be no doubt that Neit the patroness of Sais, where she was worshipped in conjunction with Osiris and Horus, is the deity to whom he applies this name. Again, in the fourth book he says that the maidens of the Libyan tribe called Ausees celebrated a yearly feast in honour of "Athena." Now it is quite clear that he regards the "Athena" of Sais, and the "Athena" worshipped by the Ausees, as identical. But it is no less clear (see book iv. 180) that this view is sensibly influenced by the false etymology which connected the Greek *Τριτογένεια* with Lake Tritonis. In short, Herodotus, however admirable in other respects, is not to be trusted when he turns to identifying the gods and goddesses of different countries; and this is a fact which is universally recognised unless his support is needed to maintain a thesis.

But even were it proved up to the hilt that Neit was worshipped in the eastern districts of Libya at the time when Herodotus wrote, it would contribute very little to determining the origin of the cult; which at this late period may well have spread beyond its earlier boundaries. It is at least as likely that the Saite monarchs imposed the worship of the patroness of Sais upon their neighbours as that they borrowed it from them.

It is necessary therefore to put aside the testimony of Herodotus as having very little true bearing on the subject, and to enquire whether there is reason to suppose that the Libyans had any knowledge of Neit before the Saite period. Here an interesting and valuable argument is available. The symbol of Neit is , which is commonly considered to be the shuttle.† It is precisely the same as  that which is seen in the form of a tattoo-mark upon the Libyans of the nineteenth dynasty pictures (tomb of Seti I.). Few Egyptologists are likely to be content with M. Lefébure's explanation

* On Neit see Wiedermann, *Die Religion der alten Ägypter*, p. 77, and Mallet, *Le culte de Neit à Sais*.

† It is worth reminding the reader that the one remarkable point about the weaving of the Chawia and Kabyles, is that it is done *without* the shuttle.

that the Libyan in such cases has been branded as a captive with the mark of the Egyptian goddess to whom he has been dedicated. It must therefore be admitted that the symbol of Neit was known to the Libyans, and used by them as an ornamental device as early as the time of the nineteenth dynasty. Still, considering how much of the ornamental art of the Libyans was of a common character with that of the prehistoric Egyptians, it would not be safe to over-emphasise what may be merely a coincidence of patterns without any special significance.

Finally, it is pointed out that the crown of Neit forms the lower half of the double crown of Egypt. There would be nothing in any way remarkable in this if, as we are suggesting, she was a purely Egyptian goddess. The further identification of the phonetic value which is expressed by this crown in the hieroglyphs with the word "Battos," which Herodotus says was the Libyan name for a king, is extremely precarious.*

Pro-dynastic
carved slates.

Probably one of the most telling arguments in favour of the Libyan connections of prehistoric or proto-dynastic Egypt, has been that no less an authority than Professor Maspero identified the figures of a carved slate in the Louvre as Libyan huntsmen.† At the time when it was made his declaration carried general conviction; but, now that so much more work of the same kind has been discovered, it may perhaps be permissible to criticise the validity of the original judgment in the light of the new material that has since become available.

Seven of these finely sculptured slates are now known, exclusive of unimportant fragments.‡ Representative examples are to be seen in the Gizeh Museum, the Louvre, the British Museum, and the Ashmolean at Oxford. All of them exhibit a close similarity in type; and there is as little diversity in execution as is compatible with the independence of individual artists. Three out of the seven depict animals only; § but on the remaining four, there are figures of men carved with an exquisite fineness of detail. It is the physical type shown in these figures that has now to be

* The crown of lower Egypt is often used in the hieroglyphs in place of the hornet. Now the correct transliteration of the phonetic value of the hornet is *Byti*; in which the *y*, which is not a vowel but a consonant, forms an essential and indispensable part of the word. Even if it were conceded that the crown had the same phonetic value as the hornet (which is by no means proved by the mere fact of the two being sometimes interchangeable), it is clear that the word does not sufficiently resemble *Bat* or *Battos* to justify so daring an identification.

† *Histoire de l'Orient*, vol. ii. ch. vii.

‡ Mr. F. Legge has published them all together in *Proc. of the Soc. of Biblical Archaeology*, vol. xxii. May-June, 1900.

§ It would be quite worth while to compare these with the animals in the Libyan rock-drawings of Tiout. The occurrence of giraffes on the slates suggests intercourse with Central rather than with North-Western Africa.

discussed. Two of the slates in question are in the Louvre, and one is at Gizeh, while of the fourth there are two large pieces, one of which is in the British Museum and the other in the Ashmolean. On all these, men are represented with a studiously realistic art ; and, with the exception of the triumphing king on the reverse side of the Gizeh palette, they are precisely identical in feature.

The type, however, which is thus frequently repeated, does not in any degree resemble that of the familiar pictures of Libyans in the eighteenth, nineteenth, and twentieth dynasties ; and it is equally far removed from that of the modern Berbers. So strongly marked are its characteristics that it should be possible some day to find and



FIG. 1.



FIG. 2.

identify the modern representatives of the race. In Fig. 1 is shown one of the heads, taken from the fragment in the Ashmolean ; beside it in Fig. 2 is the head of a Libyan from the tomb of Merenptah.*

It is obvious that in Fig. 1 the crisp buckling curls on the head, the very peculiar beard,† and above all the extraordinary bulbous nose (which resembles nothing so much as a large onion suspended by a string from the forehead) make up an ensemble which is as different from that of Fig. 2 as anything could be.‡ The nineteenth dynasty Libyan has curly hair, but it falls in long corkscrews ; his features are quite European,

* The design on the cover of this book represents another Libyan, from the tomb of Seti I.

† It has been suggested that the men may be wearing wigs and false beards. It is possible, though it is a quite gratuitous inference. Even if this be so, however, it needs explanation none the less. There is no reason to suppose that Libyans wore wigs and false beards, rather the contrary.

‡ The type suggests that described by Denham and Clapperton as found among some of the Tibboos (*Travels and Discoveries in North Africa*, vol. i. p. 139). It might be worth while to look for it on the road towards Lake Chad. The Tibboos described by Lyon are very different.

with the fine nose and well-shaped mouth. Again, where can the side-lock of the true Libyan be seen on the slate palettes? *

It may be objected that it is unfair to compare the productions of two such very different schools of art as these. The objection would be amply justified if an attempt were being made to compare or to contrast details of technique, or execution, or even aesthetic conception. But in the case under consideration, the striking difference between the two ethnical portraits arises from no such accidental causes of variation; it is fundamental, rooted in the very core of the subject. What the sculptor and the painter each set before him as his end was the realisation of a racial type. No one will question the evident fidelity with which the sculptor pursued his aim; while a glance at the other portraits of natives which accompany that of the Libyan in the royal tombs should put the intelligence and ability of the painter equally beyond all doubt. Nothing would have been easier for him than to paint such a caricaturist's model as is figured on the slate; it is proved by his excellent pictures of Negroes. If instead of this he produced a fine-featured European type, it must have been because such a type alone corresponded to the original.†

Libyan and
Egyptian script.

The discovery, which is due to the researches of Mr. A. J. Evans and of Professor Flinders Petrie, that the alphabet contained in the numerous inscriptions which have been found all over North Africa forms part of a single system common to Egypt and Crete on the one side and Spain on the other, is one of the most important of recent contributions to prehistoric archaeology. For over fifty years the subject of these inscriptions has interested the attention of epigraphists. They have been found as far east as the peninsula of Sinai and as far west as the Canary Islands;‡ and though they are most plentiful in the coast region of eastern Algeria, their range extends far south into the Sahara. Of those which have been brought to light in Algeria and Tunis, some are bilinguals,§ with Phoenician or with Latin versions, so that considerable

* Von Bary seems to have found the side-lock worn in the Aïr district, "Trois Kel-Fadé montés à méhari sont venus au village et m'ont rendu visite. Deux d'entre eux avaient de longues tresses pendantes telles que je n'en avais jamais vu chez les Touâreg; l'un avait même de chaque côté de la tête de petites houppes tressées, qui lui donnaient un air presque féminin. C'étaient de beaux hommes au teint blanc. Leur pays porte bien le nom de Kelfo." (Von Bary, *Dernier Rapport d'un Européen sur l'Oasis de Ghât*, trad. Henri Schirmer, p. 157, cf. also p. 166.)

† It is somewhat anticipating the conclusions to be arrived at in Chap. XIV to state that the prehistoric and proto-dynastic Egyptians were not Libyan by race, in spite of the intimate commercial connection. This, however, leaves us free to express the opinion, which is in complete consonance with the anthropometrical results, that the men depicted on the slates are the genuine prehistoric (but probably *not* the proto-dynastic) inhabitants of Egypt.

‡ See *Mem. Soc. Arch. de Constantine*, 1875, for their distribution as it was known up to that date.

§ The most famous of these is the bilingual of Tugga in Tunis, the original of which is now in the British Museum.

progress has been made in the decipherment of their meaning. This point, however, is unimportant for the present purpose except in so far as the undoubted occurrence of typically Berber names confirms the view that the script was employed by the true natives and not by any alien people on their soil. The fact that the letters are in the main identical with those of the modern Touâreg alphabet, which is still in use, affords an interesting parallel to the survival of the prehistoric pottery of which so much has been said in the present volume ; and justifies the hope that the original phonetic values may to a great extent be recovered.

The most comprehensive of the various versions of this alphabet which appears in the inscriptions, is that given by Faidherbe.* It consists of twenty-seven signs, of which twenty-three are common to the Tugga inscription and the funerary stelae,† while four are peculiar to Tugga.

The signs are as follows :—

LIBYAN ALPHABET

—	└┐	+	⋈
≡	1 ↑	└┐	↘
	∞	×	◻
┐		⊥	} Peculiar to the Tugga inscription.‡
==	◻ ●	⊥	
◻ ○	8	⌒	
	~ Z ↘	^ v	

Into the vexed question of the exact phonetic values we do not propose to enter.

* *Collection complète des inscriptions numidiques.*

† These are very numerous. The most interesting have been found in the Cheffia Valley near Bône.

‡ Faidherbe has omitted one common sign, analogous to Nos. 2 and 3 ; it consists of four horizontal or vertical bars.

The "Tifinagh" alphabet of the Touâregs was first discovered by the ill-fated Dr. Oudney, who died on Denham and Clapperton's great expedition. He noted the characters in the neighbourhood of Mourzouk in Fezzan, and described them in these words.* "On almost every stone in places they frequent the Tuarick characters are hewn out. It matters nothing whether the letters are written from the right to left or *vice versa* or horizontally."†

A similar impartiality is characteristic of the Libyan inscriptions; for that of Tugga reads from right to left, while the funerary stelae in most cases read upwards, but occasionally downwards. Oudney gives nineteen letters with their names, so that his list is less complete than that of Hanoteau whose version is as follows:—‡

TIFINAGH ALPHABET

Phonetic Value (French).	Phonetic Value (French).	Phonetic Value (French).	Phonetic Value (French).
• a, i, ou	◻ ◉ s	••• k'	ﻑ Arabe
◻ ◉ b	⋮ ⋮ g	⋮ r grasseyé	ﻏ Arabe
+ t	⋈ g doux	◻ ch	ﺷﻲ Arabe
◻ ^ ◻ d	≡] [f	⋮ h	ﺍﺭﺑﻪ Arabe
≡ j	l	⋮ } dh t' }	ﺍﺭﺑﻪ Arabe
# z	⌋ m	⋮ kh	ﺍﺭﺑﻪ Arabe
⋈ z doux	n	⋮ ou long	ﺍﺭﺑﻪ Arabe
◻ ◉ r	•• k	⋮ i long	ﺍﺭﺑﻪ Arabe

* Denham and Clapperton, *Travels and Discoveries in Northern and Central Africa*, vol. i. p. 110 (London, 1828).

† Mr. Evans, seeing that Oudney meant to describe three different methods, takes his words as applying to entire lines and supposes "horizontally" to be a slip for "vertically." But may not Oudney have been speaking of the individual letters? In that case his words would be quite intelligible.

‡ Hanoteau, *Grammaire Tamachek*, Paris, 1860.

Some of these combine into composite forms, viz.—

TIFINAGH ALPHABET—*Continued*

 bt	 st	 lt	 cht
 zt	 gt	 mt	 nk*
 rt	 g't	 nt	

The close similarity of the two alphabets is at once apparent. The "Tifnagh" has undergone a few modifications, notably in respect of such signs as those numbered 16, 17, 18, 20, 22, 23, where what had been bars in the Libyan are replaced by dots arranged in the same way. But the persistence of the forms for fully 2000 years almost unchanged is a strong confirmation of the view that they are the survivals of a system which is even some millenniums older, as is now to be explained.

Mr. Evans and Professor Flinders Petrie have shown that certain linear characters which have been found on the prehistoric Egyptian pottery (especially on that of the Polished red and Black-topped classes) from a signary in which a large number of the characters are identical with the Libyan and the "Tifnagh"; at least nineteen being common to both series. Mr. Evans has further proved† that thirty-two of these Egyptian signs coincide with the script which he discovered in Crete; twenty of the

* The brothers Beechey, who were travelling in Tripoli at the same time that Denham and Clapperton were going farther afield, remarked on certain stones near Zaffran, what they describe as "unmeaning scrawls and some of those marks which are used by the Arabs to distinguish their particular tribes" (*Travels*, London, 1828).

The "marks," with the names of the tribes to which they belong, are given as follows:—

				
Mogharbé.	Ouarghir.	Weled Sulimân.	Orfilli.	Weled ben Miriam.
				
Weled Abou-Saif.	Gedâdfa.	Hemâmla.	Zoazi.	Zoia.
				
Hassoun.	Jebshia.	Name forgotten.		

† "Further discoveries of Cretan and Aegean Script" in *Journal of Hellenic Studies*, vol. xvii. Also published by Quaritch, London, 1898.

Cretan being also Libyan and "Tifinagh" forms. Moreover, he has shown a very close similarity between entire sign-groups from Crete and Egypt.

On his side Professor Petrie* has demonstrated that these several series form part of a uniform system, which, in historic times, extended from the most eastern to the most western borders of the Mediterranean. For out of the sixty different characters which appear in the Carian and Celtiberian alphabets, no less than forty-four are known in Egypt at various periods. From the fact of so cumbrous an alphabet prevailing all over the Mediterranean littoral in historic times, it is justifiably inferred that it was not a late introduction, but a survival of the same which has just been described as existing in Egypt before the reign of Menes.

The linear characters in Egypt are earlier than the hieroglyphs, though a few of the forms may ultimately have been fused with the latter. Evolved at a date when hieroglyphic writing was unknown, they persisted with a strange vitality and were never absorbed or ousted.† The discovery that they form part of a great interrelated system has revealed a wholly new view of the wide commercial relations which must have existed between countries, some of which are generally conceived to have been the abode of mere barbarians. It suggests that Libya and even Spain participated in the culture of early Greece and Egypt.‡

Having now examined the chief arguments which have been adduced in favour of an early Libyo-Egyptian connection, it will be well to summarise the results. Briefly, then, it appears that, when the unsatisfactory evidence has been eliminated, the case comes to be based on three points—

* *Journal of the Anthropological Institute*, vol. xxix. (new series ii.), p. 204.

† They occur even as late as Roman times (Petrie, *op. cit.*), though the twelfth dynasty is probably the richest in them, cf. Evans, *Cretan Pictographs*, London (Quaritch). It may perhaps be objected that as they are known to have lasted on so long, their introduction into Libya may have been comparatively late. The evidence is distinctly in favour of their introduction or use in North Africa being contemporary with their first appearance in Egypt, but the other possibility should not be lost sight of. It is the more necessary to be cautious as the use of the black-ornamented white pottery in Libya (cf. Chap. X) shows the close connection of that country with Cyprus and the Eastern Mediterranean at so advanced a period as the ninth century B.C.

‡ Those desirous of pursuing further the subject of the Libyan inscriptions are referred especially to—

Faidherbe, *Collection complète des inscriptions numidiques*.

Reboud, *Recueil d'inscriptions Libyco-Berbères*.

Letourneux, *Du déchiffrement des inscriptions Libyco-Berbères*. (International Congress of Orientalists, Florence, 1878.)

Mémoires de la Soc. Arch. de Constantine, particularly the years 1869, 1875, 1878.

Halévy, *Etudes Berbères*.

Lastly—Tissot (*Géographie comparée de la province romaine d'Afrique*) gives a useful résumé.

- (1) The extraordinary and minute resemblance of the pottery.
- (2) The close resemblance of the character and detail of the decorative art, as exemplified chiefly by the patterns on the pottery.
- (3) The existence, probably at a contemporary period, of the same script in both countries.

These we consider are amply sufficient to establish the view that very intimate relations existed between Libya and Egypt in prehistoric days, that is to say before the Fourth Dynasty. The question next arises whether this connection was simply one of commerce, or whether it is to be explained by an ethnical identity of the two populations. In short, were the Egyptians of prehistoric Egypt, as has often been assumed, of definitely Libyan stock? This question can be answered only by anthropometry, and we postpone its treatment until an account has been given of some of those Libyan monuments which have supplied a part of the craniological material on which the analysis of race depends.

CHAPTER XII

RUDE STONE MONUMENTS IN ALGERIA

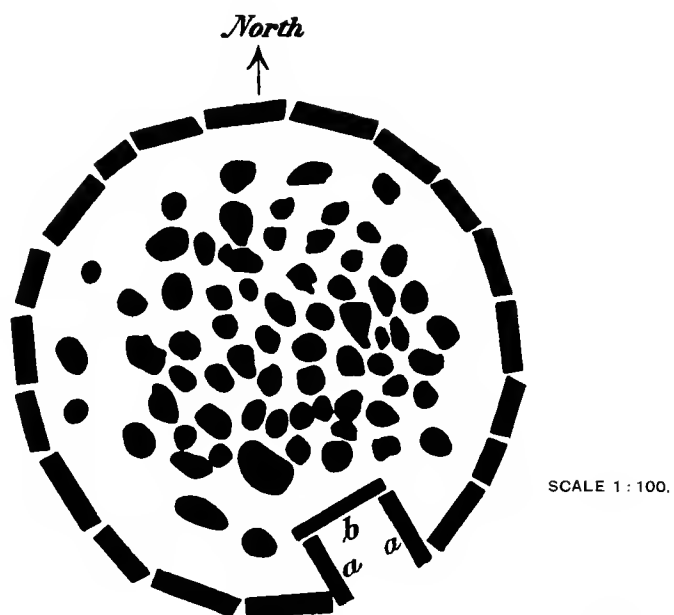
THE "SENÂM" NEAR MSILA—BOU NOUARA—BOU MERZOUG—ROKNÎA— QUESTION OF ORIGIN AND DATE

"RUDE Stone Monuments," to adopt Fergusson's convenient phrase, are found all over North Africa and are of frequent occurrence in Algeria. Nevertheless a somewhat closer examination of the sites reduces the number of genuine instances considerably below the ordinary estimate. Just as it has been found that many supposed prehistoric monuments in Tripoli are nothing more remarkable than Roman oil-presses,* so there can be little doubt that travellers in Algeria have sometimes failed to discriminate between Roman and native work. But when all due allowance has been made for the mistaken reports of careless observers, it must be admitted that a very large number of true "rude stone" structures are to be seen in various parts of the country. Their date may be matter of dispute, but their barbarian type is unquestionable. Unfortunately so little excavation has been undertaken that it is by no means easy to assign them to a precise period or race. As, however, we ourselves consider it probable that they are of ancient date, and are convinced that they are the work of the native Libyans, the present chapter is devoted to an account of four representative sites. One of these, the Senâm near Msila, has not, it seems, been previously described; the other three, viz., Bou Nouara, Bou Merzoug, and Roknîa are comparatively well known.

The Senâm near
Msila.

The railway from Algiers passes through the small town of Bordj Bou Areridj, which is situated about half-way between Beni-Mansour and Setif. From Bordj Bou Areridj a diligence runs due south in about seven hours to Msila, another small French settlement. From Msila there is a mud track, which is at present being converted

* J. L. Myres in *Proceedings of the Society of Antiquaries*, Ser. ii., vol. xvii. p. 280 ff. (19th Jan. 1899).



1. DIAGRAM OF THE CIRCULAR GRAVE CHARACTERISTIC OF THIS SITE.



2. A TYPICAL CIRCULAR GRAVE.



3. GENERAL VIEW, SHOWING SOME OF THE CIRCLES AND THEIR NICHEs.



4. NEAR VIEW OF THE NICHE CHARACTERISTIC OF THESE CIRCLES.



5. THE DESTROYER AT WORK—REMOVING THE STONES FOR ROADMAKING.

into a fine road, as far as Baniou, beyond which a worse track leads through the sand to Bou-Saâda. At about a third of the distance from Msila to Baniou there is marked on the map an artesian well called Bîr (Puits) Souid. From this point a long low rise can be seen about 10 kilometres to the W.N.W., which stands up conspicuously above the level plain. This is the Senâm.*

The eminence, judging by eye, is about 400 or 500 yards long, and is covered all over with numerous circles made of the natural unhewn slabs of the "shallow-water limestone," which here suddenly crops up from the mud level. The circles are so thickly placed that in many cases they almost abut on one another. They occupy the entire crest and slopes of the rise and extend well down on to the level. From the highest point we counted 120 clearly outlined. Many more were too much ruined to allow of their limits being fixed, but it certainly would not be an excessive estimate to say that there were in all several hundreds. In Plate XV. 3, is shown a general view of the site; in the background is a shanty erected by the sub-contractor, who was using the place as a stone-quarry for his road. One of the most perfect circles is shown in Plate XV. 2, and the diagram in Plate XV. 1 gives its characteristic features.

The circles were composed of the flat slabs of the natural rock turned on edge and then bedded into the ground. Few admitted of close measurement; three perfect examples were respectively 23 feet 6 inches, 26 feet 9 inches, and 34 feet 4 inches in diameter; others were obviously a little larger and smaller than these, but their dimensions could not be accurately taken. The slabs were of all sizes and heights according as they had come most conveniently to hand, and were not very closely adjusted to one another. In the first of the examples of which the diameter has just been stated two of the largest stones measured respectively 4 feet long by 2 feet high from the ground, and 5 feet 6 inches long by 2 feet 6 inches high, with a maximum thickness of 10 inches. In the third of the quoted examples the highest stone rose to about 3 feet from the ground and was 2 feet 4 inches wide by 7 inches thick, and a fourth circle was of a similar height.

The peculiar and invariable characteristic was that at a point in the circumference, generally about S.E., but varying a little to the S. or to the E., there was a break in the ring which was occupied by a peculiar niche. Such a niche is indicated in the diagram (Plate XV. 1) and a near view of a typical example is given in Plate XV. 4; it

* The Arabic word Senâm is apparently applied indiscriminately to any collection of large stones and is no guide to the character of a site which is so named.

is composed of two slabs a , a , about 4 feet apart, which are set in from the edge of the ring and closed by a third slab, b , at right angles. In the first of the above-quoted examples the length of the inset from the exterior of a , a , to the exterior of b , was 4 feet, the side slabs being 1 foot 6 inches high and 3 feet 4 inches apart. In the second the inset was the same, but the distance between the side slabs was only 2 feet 6 inches. In the third the inset was longer, viz. 5 feet 6 inches; and the side slabs were 6 feet apart at the point where they were flush with the outside of the ring, but only 4 feet 7 inches apart where they met the cross-slab. Whether these niches had ever been fitted with covering-slabs was a question which could not be determined. Not a single one of the entire number had such a slab in position when we visited the site, nor were there traces of any having fallen off. However, the very intelligent Italian who was then accompanying us positively stated, in answer to questions on the subject, that he had formerly observed a covering slab in at least one case, prudently adding that he could not tell whether it had not been placed there by Arabs. Certainly no one who is familiar with the character of Arabs will suppose that they would unnecessarily lift a very heavy stone and put it into such a position, unless there were a chance of gaining money by so doing; and accordingly this hypothesis may at once be dismissed. On the other hand, it is very possible that when removing the stones for roadmaking (Plate XV. 5), they found the covering slabs at a convenient height for shifting and therefore took them before any others. It is very much to be regretted that the site had been so despoiled before any observations could be made upon it, as the question whether the niches were or were not covered over is of great importance for determining the relation which these unique circles bear to the familiar dolmen-graves.

The illustrations and the diagram show how the interior of each ring was filled with rough stones irregularly heaped and scattered. They may of course have been disarranged by the Arab destroyers; at present there is certainly so little sign of any system that it is not easy to decide whether the original intention was to form a second ring on the inside, or to make a central heap at some fixed distance from the exterior circle, or simply to heap over the interior without any definite plan. We incline to think that the last is the true view, as in the examples which seemed to be quite perfect and intact there was no appearance of any more definite system than in those which were ruined.

In general the circles seemed to stand in no particular relation to one another, but one case was exceptional. The ring was about 29 feet in diameter and from the

outside of it there ran three radii like the spokes of a wheel, one going due E., one due S., and one W.S.W. The radii were about 19 feet in length and composed each of two rows of slabs set on edge about a foot apart. The stones in the immediate proximity were too scattered for us to say whether the rows connected the circle with any others.*

It remains to discuss the meaning of these singular structures. It will probably be suggested that they were hut-circles; but nothing is more improbable. Their arrangement is such that they would have formed most inconvenient dwelling-places, and is not at all like that of the ordinary hut-circle; moreover, if this hypothesis were accepted the peculiar niches would be meaningless. There can be little doubt that this "Senâm" is a great cemetery, and that the circles were graves. Similar circles without the niche have been found in Apulia;† in which case they proved to be graves, while the hut-circles near them were quite different in arrangement. On the Italian site it seems as though the builders had attempted to reproduce as nearly as possible the form of a round barrow; only the nature of the ground forced them to employ dry stones instead of earth. The niche is the feature that it is difficult to explain, but a glance at the plan of a Mycenaean "beehive" grave will show a very suggestive resemblance.‡ In short, we consider that these circles of the "Senâm" near Msila are derived from some such type as that of the "beehive" graves, the gallery leading into the latter being here replaced by a sort of false door above the ground.§

Within and about the circles we picked up numbers of tiny black flints, many of them worked, which must have been brought from a distance as there seems to be no native flint on the spot.

At Tarmount, which is a short day's journey west of Msila, there are said to be remains of a precisely similar character to those at the "Senâm" just described.

The other three sites to be dealt with in this chapter are situated in a different part of the country, viz. in the immediate neighbourhood of Constantine. They all

Dolmens at
Bou Nouara.

* Cf. M. Féraud's account of a similar arrangement at Bou Merzoug.

† See Giovanni Patroni, "Un villaggio siculo presso Matera" in *Mon. Ant.* viii.

‡ Again, the famous circle at Mycenae actually has an inset for entrance, very much like that of this "Senâm." See Schliemann, *Mycenae and Tiryns* (plan of the "Circular Agora with the five Royal Sepulchres").

§ An interesting type, which may be regarded as intermediate, is seen in the stone remains at Hammâm-Soukera in Tunis. These consist of tower-like structures vaulted with rough blocks, an open dolmen forming a sort of entrance outside. See "Monuments mégalithiques de Tunisie," by Girard de Rialle in *Bulletin des antiquités africaines*, vol. ii. p. 267.

resemble one another in type, and are quite different from the "Senâm" near Msila; though we are not prepared to say that they may not be ultimately derived from the same form. There seems to be a certain observable progress in development, Bou Merzoug and Roknía being certainly of a less advanced and perfected type than Bou Nouara; but the dolmens of the latter site are so comparatively intact and well preserved that it is preferable to describe them first.

Bou Nouara is a railway station on the line from Constantine to Guelma; and the dolmens, which are about a mile from the station, are so close to the line that many of them can be well seen from the train. Nevertheless no traveller seems to have been sufficiently impressed with their importance to take the trouble to excavate there. A general idea of the appearance of the site may be gathered from the photograph in Plate XVI. 1.

The type of the graves is invariable; it is that of a dolmen within a circle. Regular and careful as the building of these often is, the stones composing them are merely the natural unhewn blocks; which are of a stone closely resembling, if not identical, with that which occurred near Msila. The hill on which the necropolis is placed extends for a considerable distance. We explored it for perhaps a mile, over the whole of which space the ground was thickly covered with dolmens; though they did not appear to extend much, if at all, down on to the plain. There was no sign of any systematic grouping, but the individual examples appeared to stand independently each in its own place. Their orientation varied considerably and was evidently determined as much by the trend of the ground as by any definite scheme. The general lie of the hill was about N.W. and S.E., but it curved round considerably. The graves were oriented sometimes N.W. and S.E., sometimes N. and S.; but the builders seem always to have avoided placing the dolmen in such a position that the length of the covering slab should slope uphill. Possibly this was merely because the run of the strata made it easier to lift the long slabs this way.

The photograph in Plate XVI. 5 gives the best idea of the complete form of one of these graves. The dimensions and the details vary but the type of structure is uniform. It consists of two parts—the enclosing circular platform and the dolmen itself. The circle is built up of two or three courses of stone blocks, carefully chosen so as to lie evenly on the top of one another (Plate XVI. 2), which rise in the most typical cases to a height of about 1.30 m. on the lower side where the ground falls away. On the upper side the height is much less, generally only about 30 cm.



1.



2.



3.



4.



5.



6.

(*i.e.* one course only). This arrangement is so contrived as to neutralise the slope of the hill and make a sort of level platform; so that the circles look almost like diminutive towers from below, while, if viewed from above they hardly seem to rise from the ground. The diameter is 6.50 m. in the smaller and 10 m. in the larger examples, and there are all intermediate sizes.

The dolmen itself stands in the centre of the circle, and in the most typical cases consists of a long slab placed on two entire side slabs. The ends at the back and front are open in the somewhat ruined dolmen seen in Plate XVI. 5, but in the more perfect examples they are closed. This is done in any one of three ways, viz. either with an entire slab at each end or with an entire slab at one end, and small stones at the other, or with small stones built up at each end. The last of these methods is rather exceptional, and marks a distinct development. It belongs to graves of a rather more advanced type, such as that of which the interior is shown in Plate XVI. 6, where, instead of entire side slabs, there are regularly built up walls of carefully selected stones. The dolmens are not placed on any sort of raised mound, but stand up from the platform only by the height of their side walls or side slabs; the lowest that was measured rose to about 70 cm., the highest to about 1.50 m. from the ground. The covering stone varied considerably in size, but averaged about 2 m. in length by 1.50 m. in breadth. In the example figured in Plate XVI. 6, the covering slab having broken and fallen in, and the sides being exceptionally regular, it was possible to measure the actual interior of the grave, which proved to be 1.30 m. in length by 85 cm. in breadth. The space between the outside wall of the circular platform and the dolmen itself was filled with rough blocks. The last feature can be well observed in Plate XVI. 4, where the stones are piled one on the top of the other right up to the dolmen, but in most cases this stage had not been so elaborately and completely carried out.

The spring of Bou Merzoug is about 7 kilometres distant from Oulad Rahmoun, Dolmens at Bou Merzoug. which can be reached by rail from Constantine in about an hour. It was from Bou Merzoug that the Romans brought the water for their city of Cirta, and remains of their masonry may still be observed there.

The low hill, at the foot of which the spring rises, is covered with innumerable graves of rude stone, and many more extend down to the level of the valley. This is one of the few sites of the kind in Algeria which have been to some extent explored. Mr. Christy and M. Féraud spent several days here, during which time they examined

more than 1000 graves and opened 13. An account of their results was published by M. Féraud in the *Notices et Mémoires de la Société Archéologique de Constantine* for 1863, to which there will presently be occasion to refer.

Views of the hillside are given in our Plate XVII. 1, 2. From these it will be seen that the general character, both of the site and of the stone remains, is very similar to that of Bou Nouara. The type of grave is essentially the same as that which has been described in the last section, viz. a dolmen enclosed within a circle; but there are some very important differences of detail. Generally speaking, the graves at Bou Merzoug are not in such good preservation, so that it is less easy to be quite certain of minor features, but it is evident that they were not originally constructed with the elaborate care that distinguishes those of Bou Nouara.

The exterior circles exhibit a form which may perhaps be regarded as transitional between the type found at the Senâm near Msila, and that at Bou Nouara. When the stones composing them are unusually large and high they are merely set on edge and form a single course. More often, however, there are two or three courses of substantial oblong blocks placed one on the top of the other. These are much disarranged and ruined, but it is not likely that they were ever so perfect as those of Bou Nouara, nor that they rose to the same height. Three courses of stones would have been the utmost attained at any time, judging from the very slight elevation of the dolmen in the centre.

This entire description will sound very remarkable to those who are familiar with the plan and elevation given in Fergusson's *Rude Stone Monuments* (woodcut 169); but it should be stated at once that the woodcut in question represents nothing better than a product of the author's imagination. Fergusson candidly states that he has been "obliged to take some liberties with M. Féraud's cuts." The result is most unfortunate as the reader of his work is given the impression that the graves of Bou Merzoug are lofty tumuli, surrounded at various stages of their height with rings of stones and crowned with dolmens. Nothing can be further from the reality. The elevation of the dolmens above the natural level of the ground is generally less than a metre, the height, that is to say, of their supporting side-walls. The concentric circles are all on the same plane, and rise to at most two or perhaps three courses of stones from the ground-level. Finally, though such interior circles undoubtedly exist, it is by no means easy to discriminate them from the aimlessly scattered stones, or to exactly determine their number.



1. BOU MERZOUG.



2. BOU MERZOUG.



3. BOU MERZOUG.



4. BOU MERZOUG.



5. ROKNÍA.



6. ROKNÍA.

An unusually perfect example of one of these graves, which admitted of detailed study, consisted of (*a*) an outer circle 8 m. in diameter; (*b*) a well-defined inner circle 4.40 m. in diameter; and (*c*) the dolmen itself in the centre of all, which was 1.50 m. long by 1.40 m. wide. Between (*a*) and (*b*) and between (*b*) and (*c*) was a more or less irregular and ill-defined circle of smaller rough stones. This tallies closely with M. Féraud's plan which shows four concentric circles. It was rare, however, to find an example of which the construction could be determined so precisely. Ordinarily the stones were so scattered that it could only be positively asserted that there was an outer enclosure and a dolmen, with a number of stones between the two. It is very probable that six-and-thirty years ago the graves were more perfect; for though we do not know of any such wholesale destruction as was taking place near Msila, the site would form a tempting quarry for any person who wanted material for road-making or building. Moreover, in estimating the chances of destruction it must be remembered that the Romans needed stone for their works at the spring head; and even the original builders may sometimes have despoiled a neighbouring grave to obtain the materials for a new one.

The circles varied in size, but 8 m. appeared to be the average diameter. The dolmens were supported on side-walls which did not (as in the most typical examples at Bou Nouara) consist of entire slabs, but of several large rough stones, the intervals between which were filled in with smaller pieces. This system corresponds to that found in the rather exceptional grave (Plate XVI. 6) at Bou Nouara, but the construction was very rough and far inferior to what has been described in that case. The orientation was sometimes E. and W., sometimes N. and S.; there appeared to be no fixed system.

In Plate XVII. 4 is shown the rectangular chamber which contains the grave. The example figured here is very probably one of the graves which were actually opened by Mr. Christy and M. Féraud, as the dolmen has been much destroyed and the interior laid open. The side-walls were made of unusually large blocks, of which the smoothest face has been turned inside, so that they present a very regular appearance; but neither these nor any other stones used in the construction of the graves were hewn, squared, or worked in any way.

The number of the graves must have been many hundreds. As at the "Senâm," near Msila, they were very closely packed; and we were not able to distinguish any system of arrangement. M. Féraud, however, in a passage which has attracted much

attention, describes the graves as linked together by lines : " Ces lignes sont de simples, doubles ou triples rangées de grosses pierres de 0.40 m. à 0.60 m. d'épaisseur, plantées en terre et formant des allées découvertes qui relient entr'eux les dolmens, les tumulus et les cromlechs comme le fil unit les grains d'un chapelet."* We did not ourselves observe this ; but there is nothing improbable in the arrangement, which indeed corresponds in some degree to indications that we noted at the "Senâm," near Msila (cf. *sup.*).

In and about the graves on the side of the hill we picked up numerous small black flints, many of which were worked. They were exactly of the same kind as those found at the Senâm near Msila ; and, as has been remarked in that case, they would seem to have been brought from a distance, as there was no trace of any native flint on the site.

The following is an epitome of the thirteen graves opened by Mr. Christy and M. Féraud :—

1. Orientation, N.W. and S.E. Length of covering slab, 2.15 m. ; breadth, 1.40 m. ; thickness 0.35 m. Height of side-walls, 0.80 m. ; length, 1.90 m. ; thickness, 0.25 m. Width of slab which closed the dolmen on north side, 1.10 m. ; height, 0.80 m. Interior length of dolmen, 1.19 m. The enclosing circle was 12 m. in diameter. Grave contained human bones, which crumbled to dust when it was opened.

2. Three circular enclosures, the outermost of which was 12.20 m. in diameter. In centre was a trench formed by two stages of stones and covered not with a slab but with large heaped stones. Breadth of trench was 1.17 m., length 2.00 m., depth 1.50 m. At depth of 1.20 m. inside the trench was a bed of little slabs under which were—

Human bones.

Broken pottery.

Bones of a horse.

Fragments of charcoal.

A buckle, ring, and earring, all of copper.

3. A "cromlech" of similar dimensions to the last. The enclosure was square, not round. In the grave were human bones but nothing else.

4. Circular enclosure of 12 m. diameter ; "Plusieurs étages de pierre superposées et formant tumulus." In centre a dolmen oriented N. and S. ; its chamber was 2.20 m. long by 1.10 m. broad. Inside at depth of 0.50 m. was a bed of flat slabs under which were human bones in a condition too bad to admit of the position of the body being determined. At the feet were found the bones and teeth of a horse and an iron bit.

* As far as can be gathered, this passage refers only to the graves on the plain. On the hillside there is hardly room for such a disposition.

Also there were found—

A buckle and a ring, both of iron.
A ring, a plaque, and an earring, all of copper.
Fragments of worked flints.
Fragments of pottery of a very good paste.
A bronze medal of Faustina.

5. A dolmen. The grave inside it measured only 1.18 m. long by 0.62 m. broad. Contained human bones.

6. Circular enclosure of 17 m. diameter. In centre a dolmen oriented N. and S. At a depth of 0.40 m. was a bed of slabs covering the body.

Contents of grave were—

A copper ring.
Fragments of pottery.

7. A small dolmen, dimensions not given. Grave contained bones.

8. Enclosure of 7 m. diameter. Grave was a trench covered with a slab 2.50 m. long by 1.80 m. broad without side-walls. Underneath the slab was a "coffin" * of which the length was 1.30 m., breadth 0.90 m., depth 0.60 m. It contained—

Human bones.
Four pots.
Shells.

9. Square enclosure of 8 m. diameter. Dolmen faced N.W. and S.E. and its side-walls were made of several courses of stones. The chamber was 1.50 m. long by 0.60 m. broad. Contained—

Bones and small pots.
What is described as a stone axe, made of limestone.

10. Covering slab 2.25 m. long by 1.60 m. broad and 0.40 m. thick. The trench, oriented N. and S., was 1.60 m. long by 0.60 m. broad and 1.10 m. deep. The "coffin" was formed of large stones placed regularly, and contained—

A human skeleton in good condition, buried in the contracted position with knees to chin and arms crossed.

Two pots.

Fragments of cedar wood and pottery.

At the feet were two more human heads, and as there was no room for more than one body M. Féraud inferred that they belonged to decapitated victims.

11. Circular enclosure of 8 m. diameter. Trench 1.00 m. long by 0.60 m. broad and 0.55 m. deep. Covering slab 1.50 m. square and supported on two courses of stones.

Grave contained—

A skeleton in good condition, the posture contracted as in No. 10.
Pots.
Charcoal.

* "Sarcophage." M. Féraud's term is not to be taken *au pied de la lettre*, as appears from his description of grave 10.

At the feet of the entire skeleton were fragments of a second head as in No. 10.

12. Square enclosure, the length of the sides being 7 m. A square trench the length of the sides being 0.90 m. Contained—

Bones.

Charcoal.

13. Similar to 12.

The dolmens
of Roknía.

Roknía is a place well known to tourists in Algeria. At the present day it is very easy of access ; though when General Faidherbe undertook his excavations in 1867* it might well be considered remote from all ordinary routes. Hammâm Meskoutin is about four hours' distant by rail from Constantine, and Roknía is some twelve kilometres from the station. A beautiful bridle path leads over meadows blazing with wild flowers, and slopes clothed with jujubier and broom, to the site of the dolmens. These are now terribly ruined ; time has destroyed much and the excavator and the tourist have done their share. For a detailed account of the site as it appeared thirty-three years ago, the reader is referred to General Faidherbe's treatise.

The tombs, which stand on the side of a steep hill overgrown with copse (Plate XVII. 5), seem to be generically of the same kind as those which have just been described at Bou Merzoug. In their present condition it is most difficult to describe them accurately ; and but for our experience on the other sites we should have hardly felt justified even in stating that the dolmens had been surrounded with regular enclosures. From the position of the scattered stones, however, we thought it probable that at least in some cases an exterior circle had existed. Fortunately the point is decided by Faidherbe's categorical statement—" Quelques-uns d'entr'eux sont entourés d'un rond en pierres levées de huit à dix mètres de diamètre." The most important and characteristic feature of the dolmens themselves is that they are supported generally on single entire slabs,† and never on built-up courses of stones. Faidherbe noted that many of them were apparently arranged in definite order, viz. in continuous lines including some thirty examples in each. He considered, moreover, that there were traces of tool-work on the stones. If this was really the case it at once distinguishes Roknía from any of the other sites that we have described, but probably the general was mistaken.

* Published in *Bulletin de l'Académie d'Hippone*, 1868.

† Faidherbe certainly generalises too much when he says, " Assez souvent les petites côtés de la tombe sont formés par une seule pierre chacun, tandis que les longs côtés le sont toujours ou presque toujours par plusieurs." But this is a point of minor importance compared to the fact which he states and which we observed that there are never courses of stones in the side-walls.

These weathered blocks certainly look far more natural than the unworked but carefully selected slabs of the Bou Nouara graves.

In Plate XVII. 6 is shown a typical example of a dolmen at Roknía oriented W.S.W. and E.N.E.* The covering stone measured 1.80 m. in length by 1.40 m. in breadth and was 0.30 m. thick ; its height was 1.40 m. from the ground. Originally the dolmen must have been walled up in front like those which Faidherbe describes, but the stones have been removed ; round it was an ill-defined circle of stones, which was not more and might have been a little less than 9 m. in diameter.

The following is an inventory of the contents of the tombs excavated by Faidherbe—

- | | |
|--|--|
| <p>1. Skull No. 1 † which has a hole, evidently
from a wound, above the left eye.
Skull No. 9.
Fragments of another skull.
Skull of a child.</p> | <p>Four lower jaws without skulls.
Six femurs more or less complete.
An ulna, a radius, a tibia, and fragments of
other bones.</p> |
|--|--|

The only tomb furniture was one broken pot.‡

- | | |
|--|---|
| <p>2. Skull No. 3.
Skull No. 6.
Four femurs.</p> | <p>A tibia, a humerus, an ulna, and fragments
of other bones.</p> |
|--|---|

The heads were at the north end and faced east. No pots.

- | | |
|---|--|
| <p>3. Three skulls (broken and therefore not
in the plates).
A femur.</p> | <p>Three tibiae.
Two humeri.
One radius.</p> |
|---|--|

Heads were at north end, and the most complete of the two skeletons was in the contracted posture, its head facing west.

One pot with an embryo handle.

- | | |
|--|--|
| <p>4. Skull No. 14.
Skull No. 17.
A broken femur.
A broken tibia.
One pot.</p> | <p>6. Two skulls, one of which is No. 18.
Three femurs, one of which was broken.
A fragment of a pelvis.
An undersized tibia.
A pot.</p> |
| <p>5. Broken skull.
Broken femur of unusual dimensions.
One broken pot.</p> | <p>7. A thin broken skull.
The jaw of a child.</p> |

* Faidherbe's graves were oriented N. and S. in the few cases where he has made any observation on the points of the compass. The heads were at the north end, feet at south.

† The numbers assigned to the skulls correspond to the numbering in our Plates XVIII. and XIX.

‡ Faidherbe gives illustrations of the pottery, which is very undistinctive. It all looks from the drawings as though it had been made on the wheel.

LIBYAN NOTES

8. Large broken skull.
 One femur.
 One humerus.
 Broken bones.
 A vertebra of an animal.

9. Contained no less than seven skulls, these are No. 4 (with a wound in left brow), No. 5, No. 8 (with wound in right parietal), and four broken, which are not represented. The bones were all broken. There were seven pots, one being of a quite advanced type.

10. Skull No. 2, on which Faidherbe remarks that it was of a very peculiar colour, viz. bright yellow.
 Skull of a child of the same peculiar yellow.
 Jaw of a man.
 Two femurs and some fragments of bones, all of the same yellow colour.
 Two pots.

- | | |
|-------------------|--------------------------------------|
| 11. Skull No. 12. | Seven femurs. |
| Skull No. 13. | A tibia. |
| Skull No. 10. | Two coxal bones ; and parts of ilia. |

12. Skull 11.
 Broken skull of small child.
 A femur and an ulna.
13. A broken skull ; and a jaw which was that of an old person.
 A pot which contained pieces of bronze * bracelets.

14. No skulls.
 A pot.
 A bronze ring, probably earring.
 The bones of 13 and 14 got confused in the working. There were two femurs, one humerus and other bones.

The skulls numbered as 7, 15, 19, 20, come from other graves which are not entered in this inventory. All the skulls are reproduced in our Plates XIX. XX.† They have been very carefully copied from the drawings which accompany Faidherbe's treatise, and have been rearranged for convenience of reference. The original numbering, however, is kept. Elaborate measurements of them were taken, but only a few are of any interest or value ; they are reproduced in the following table :—

* Analysed as copper, 0868 ; tin, 0109 ; *i.e.* about the composition of good classical bronzes.

† Faidherbe's treatise is now so scarce as to be almost unobtainable. We think, therefore, that it is justifiable as well as useful to reproduce these skulls, which represent almost the whole of the craniological material that has come out of the rude stone graves in Algeria.

Specimen numbered	Maxm. length of skull.	Maxm. breadth.	Biauricular breadth.	Bizygomatic breadth.	Nasal length.	Orbital length.	Orbital height.	Capacity.	Cephalic Index.	Orbital Index.	
1	188	138	119	130	50	39	35	1,468	734	897	The pelvis was invariably broken, and it was therefore impossible to distinguish the sex with certainty. From the smallness of the dimensions it is clear that Nos. 5, 7, 10, 16 are women. Unfortunately, as Faidherbe does not give the breadth of the nose, it is impossible to tell what is the figure of the nasal index, which is a very valuable racial characteristic. There were no bronze objects found with the specimens which are given in this series. The extraordinary difference in the Cephalic Index of the specimens is at once apparent. It varies from 844 to 705. There seems, however, to be a median type represented by such examples as No. 1 and No. 8.
2	181	145	110	128	52	40	34	1,500	801	850	
3	190	138	110	134	56	41	34	1,538	726	829	
4	182	142	...	124	50	40	33	...	780	825	
5	178	128	...	118	50	37	35	...	719	946	
6	186	...	...	...	52	41	34	...	...	829	
7	178	...	...	...	48	38	32	...	...	842	
8	182	138	114	125	44	38	32	1,330	758	842	
9	190	134	110	...	...	...	...	1,450	705	...	
10	173	146	98	...	...	...	...	1,275	844	...	
11	182	142	100	...	...	...	...	1,300	780	...	
12	183	136	103	...	...	...	...	1,270	743	...	
13	183	134	104	...	...	...	...	1,300	732	...	
14	185	138	...	...	...	...	...	1,250	746	...	
15	185	135	...	...	52	41	33	...	730	805	
16	175	135	...	...	48	43	38	...	771	884	
17	182	137	...	...	...	...	...	...	753	...	
18	180	138	...	...	...	...	...	...	767	...	
19	188	134	...	125	46	42	32	...	713	762	
20	181	135	...	130	50	38	31	...	746	816	

The four sites that have been described in this chapter may be taken to fairly represent the rude stone monuments of Algeria. Very many others have been reported to exist,* but until they have been more systematically examined it is useless to attempt any pronouncement upon them. The most important excavations undertaken anywhere apart from Bou Merzoug and Roknia seem to have been at Djelfa, where some fine polished celts were found.†

The question now presents itself, what is the date of these remains and to what race should they be ascribed? There are various current theories, of which the extremes are represented on the one side by those who consider the remains to be prehistoric, and on the other by those who assign them to Roman or even to Vandal times. The former view receives support from the occurrence of numerous worked flints, the latter from the discovery of bronze ornaments and even of a single medal of Faustina. One point seems to us to be quite certain; and that is that these structures are of genuine native origin. They are not Roman in character, and there is no sufficient reason for ascribing them to any other foreign race. They are too numerous as well as too widely disseminated to be the work of the Vandals; even apart from the fact that stones so weathered as those of Roknia look many centuries older than this

* See the *Mémoires de la Société Archéologique de Constantine*, from the year 1863 onwards.

† The excavations were made by M. Reboud; and apparently the results were published in the *Revue Africaine*, but we have been unable to find a copy. In the Pitt-Rivers Museum at Oxford are some casts of the celts from Djelfa.

Origin and date of these rude stone monuments.

hypothesis would make them. The same objections are fatal to the suggestion that they may be due to the barbaric influence of Gaulish mercenaries in the Roman armies.

Foreign influences need not be invoked nor unknown invasions postulated to explain the existence of these dolmens and circles.* It has been frequently pointed out that they are simply the prototypes of such indubitably native monuments as the Madrassen and the so-called "Tombeau de la Chrétienne."† On a vast scale and with all the accessories of architectural ornament these colossal piles reproduce the exact type of the humble graves of Bou Nouara and Bou Merzoug. It is therefore only reasonable to regard the latter as a genuine product of the native Libyan culture.

The problem of their date is much more complex. It is certainly not fair to lay too much stress upon the finding of the medal of Faustina at Bou Merzoug. M. Féraud does not clearly state whether it was found quite within the grave, and in such a position as to exclude the possibility that it had fallen in with rubbish from the top. The Romans built works at the springhead of Bou Merzoug, which is within a few hundred paces of almost any of these graves; so that in their time the spot must have been frequented by many persons, and the medal may have been dropped by accident. No such theory, however, will explain the occurrence of bronze‡ in a large percentage of the graves that have been opened. Moreover, not only bronze but iron was found in grave 4 at Bou Merzoug and also at Djebel Madîd§ in the neighbourhood of the Hodna; while much of the pottery from Roknîa and other sites looks suspiciously well made.|| On all these grounds then we are driven to admit that some at least of these graves are of the iron age and perhaps even contemporary with the Roman occupation.

Granting then that their latest limit is approximately fixed and falls within the iron age, the question is, What is the earliest date to which any of them can go back? This

* In one case a stele with Libyan inscription formed part of a circle. But the student is warned that the pictures of it have been falsified. See Reboud, *Recueil d'Inscriptions*, p. 29.

† The "Tombeau de la Chrétienne" is now universally considered to be the mausoleum of the last kings of the Mauretania, the "monumentum commune regiae gentis" of Pomponius Mela. The immense size of both these monuments precludes the suggestion that they were the work of any except powerful monarchs who possessed great wealth and could command unlimited labour.

‡ The Libyans who invaded Egypt in the nineteenth and twentieth dynasties had weapons and vessels of bronze, as is proved by the lists of the spoil in the inscriptions of Karnak and Medinet-Habu.

§ *Mémoires de la Société Archéologique de Constantine*, 1869.

|| We judge only from the illustrations, not having seen the originals.

depends very much upon the length of time that the use of stone implements survived among the Libyans. The tiny black flints of Bou Merzoug and of the Senâm near Msila are neolithic in type ; so too are the polished celts from Djelfa. If, therefore, they occurred by themselves we should be justified in classing such sites as purely neolithic ; though it would be necessary to remember that the neolithic period may have lasted on much later in Algeria than in Egypt or Europe. But at Bou Merzoug M. Féraud found worked flints in the same grave with iron and copper ornaments. It is only one case, and the flints may have fallen in from the top surface ;* but it suggests at least the possibility that stone implements were still being used at a time when iron was well known in neighbouring countries.

One point, however, must be insisted on in this connection as it might easily be overlooked. The sites which have been excavated, as well as those which have been left intact, are crowded with many hundreds of graves. So few of these have been opened that in no single case has it been possible to acquire an idea of the character of the whole cemetery ; and it is very possible that only the latest of the graves have been opened while the earliest have been left untouched. This view receives much countenance from a study of the ground at Bou Merzoug. There the graves were very thick on the hillside and much more scattered on the plain. Nothing is more likely than that the earliest dolmen-builders began at the top of the hill, and only covered the side slopes and the level ground when all available space on the top had been exhausted. Mr. Christy and M. Féraud, it would seem, worked chiefly if not entirely upon the graves on the plain and at the bottom of the hill. It is very probable, therefore, that their results give a just idea only of the latest and not of the earliest period represented on the site. The earliest of these graves may be many hundred years older than those in which bronze was common and iron sometimes occurred. Far smaller cemeteries in the Egyptian desert contain tombs which are separated from one another in date by several centuries or even by a thousand years.

In any case, whatever may be the absolute date of these dolmens or circles, there can be no doubt that their generic type is very ancient. Just as the Libyans of the bronze or iron age built their tombs, must their ancestors have built them from the remotest times. The confederated tribes that swept down on Egypt in the nineteenth and twentieth dynasties would have buried their dead in graves very similar to those

* The reader will remember that this is the same grave in which the medal of Faustina was found.

described in this chapter ; and probably they derived the tradition of them from their forefathers who were contemporary with the prehistoric inhabitants of the Nile valley. It is therefore highly significant that no trace of any of these constructions which are so frequent in Algeria has yet been found in Egypt. We have seen (Chaps. X. and XI.) that such close coincidences exist between the earliest civilisation of the two countries as can only be explained by supposing either that a close and constant intercourse was maintained between them, or else that the population of both was racially identical. But if primitive peoples are tenacious of their artistic traditions they are still more tenacious of their burial customs. How is it then if the prehistoric Egyptians were Libyan by race that they never used dolmens or circles ? The burial practice of the Libyans links them to the early European races and to the Amorites of Syria ; but it isolates them completely from the inhabitants of Egypt of any period whether early or late.

Note.—It is to be hoped that excavations conducted in a systematic manner and on a large scale may be soon undertaken on such sites as these. Europe owes much to French anthropologists, and in the domain of prehistoric archaeology French savants have held a leading place. Is it too much then to hope that they will make an effort to remove the uncertainty in which the origin and date of these remains are involved ? Enormous sums are yearly expended by the liberality of the Government upon the excavations of interesting but after all very late and somewhat debased Roman buildings. Were a fiftieth part of the amount to be devoted to the working of the dolmen sites the whole problem might be resolved. The opening of a dozen or two graves is almost useless ; what is needed is a series of not less than fifty from each of several representative places. If we might be allowed to make a suggestion with regard to the choice, it would be that Bou Nouara, Bou Merzoug, the Senâm near Msila (or else Tarmount) and Djelfa would probably best repay excavation.

SKULLS FROM THE DOLMENS OF ROKNIA.

After Faidherbe.



N° 1



N° 2



N° 3



N° 4



N° 1^A



N° 2^A



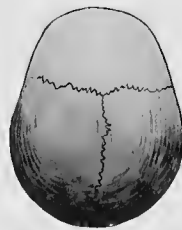
N° 3^A



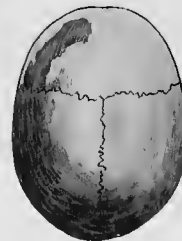
N° 4^A



N° 1^B



N° 2^B



N° 3^B



N° 4^B



N° 5



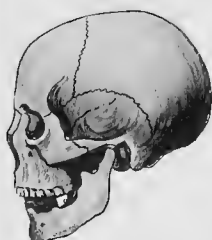
N° 6



N° 7



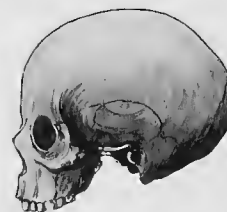
N° 8



N° 5^A



N° 6^A



N° 7^A



N° 8^A



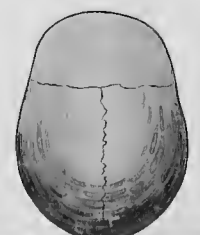
N° 5^B



N° 6^B



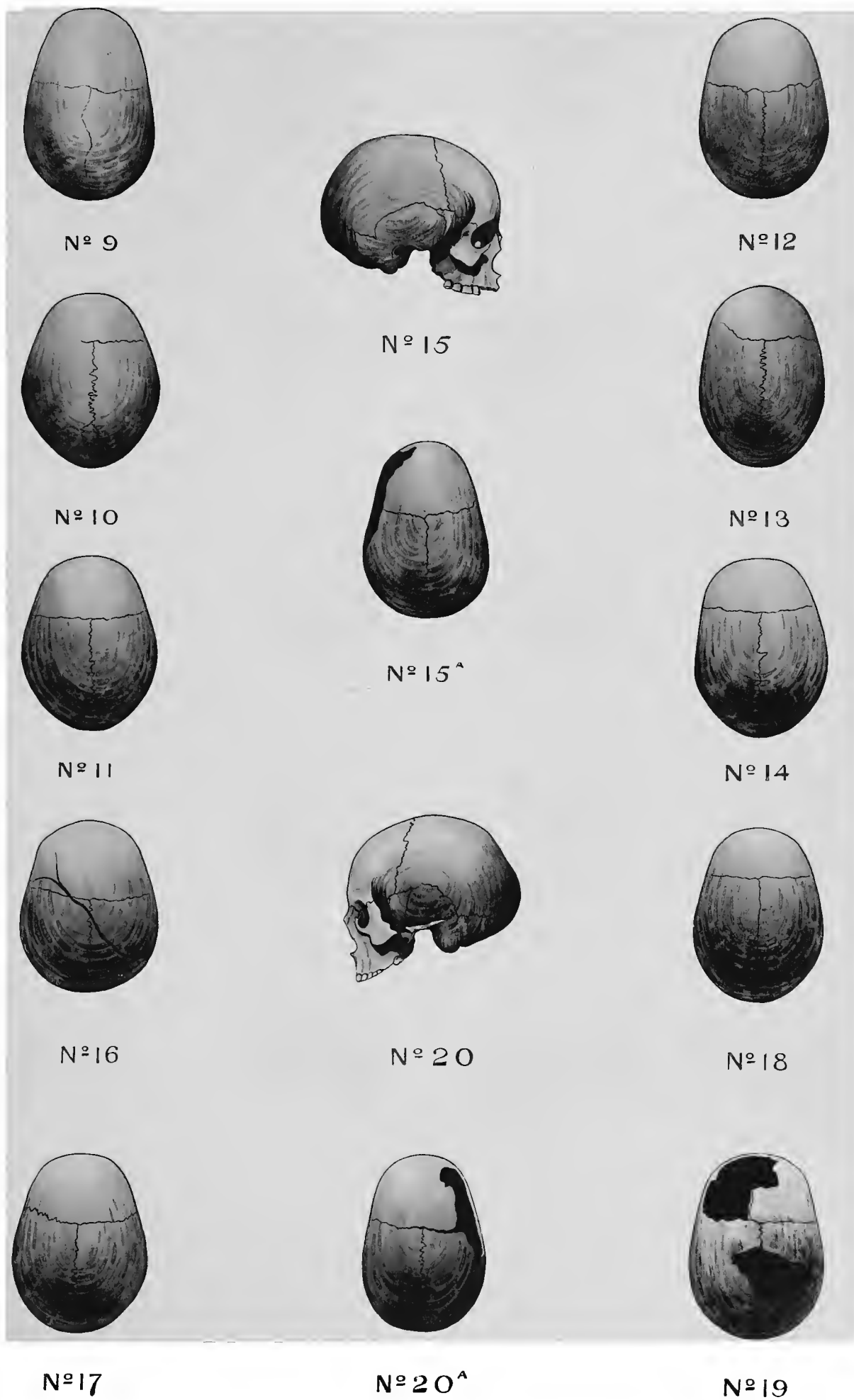
N° 7^B



N° 8^B

SKULLS FROM THE DOLMENS OF ROKNÍA.

After Faidherbe.



CHAPTER XIII

OBSERVATIONS AND STATISTICS ON THE PHYSICAL TYPE OF THE BERBERS

IN a previous chapter some general remarks have been made upon the physical type of the Berbers ; it is now time to enter into a more detailed account. One of the chief objects of our journey was to obtain a reliable series of anthropological observations of genuine native Berbers. To do this it was necessary to exercise some care and forethought, and to avoid as centres of work all French settlements and all places where there was the slightest ground to suspect the disturbing influences of an alien population whether European, Arab, or negro. Thus in the Aurès we measured no individuals at Menâa, where there is known to have been a Roman colony ; and in Kabylia we studiously avoided the immediate proximity of Fort National, Bougie, Tizi-ouzou, and all such places, where, though there is very much of the native element, there is also a strong foreign admixture. The special work was all done at three places in the Aurès, viz. El Arbaa, Bou Zina, and El Baali ; and at two places in Kabylia, viz. Ighil Ali (with Tazaïrt) east of the Sahel, and Tamaosht, which is west of the Sahel, some eighteen or twenty miles from Fort National. The details of the measurements and observations are set forth in the tables which accompany the present chapter, which are followed by six plates (XX. to XXV.) containing the majority of our anthropological portraits.*

In riding over a very considerable tract of country it was of course possible to make a great many ocular observations. These cannot compete in accuracy with the more careful notes taken at the places just mentioned, but they may be used as auxiliary to the latter for the purpose of establishing general conclusions.

* The negatives of these and of most of our other photographs which have any anthropological value will be deposited before September 1901 at the British Museum Bureau of Ethnology. They will there be available for the use of students, under the regulations prescribed by the Bureau.

Two very important questions on which exact information was much needed are

- (1) The skin-colour of the Berbers
- (2) The prevalence of blondness.

These have frequently been treated as if they were the same thing ; hence much of the confusion in which the subject has been involved.

Skin colour.

As to the first we have no hesitation in saying emphatically that the Berbers are *white* men. Our Chawia and Kabyles might be described almost exactly in the terms that Lyon has used to characterise the Touâregs* : "They are generally white, that is to say, comparatively so, the dark brown of their complexions being only occasioned by the heat of the climate. Their arms or bodies (where constantly covered) are as white as those of many Europeans."†

These words may be applied to the Berbers of Algeria without even the slight qualifications that Lyon inserts. They are *always* white, and *quite* white, except for the tan with which sun and wind and dirt darken their faces and hands.‡ We started at first to carefully test the skin tint on several parts of the body and face, but soon gave it up as quite superfluous ; for of over 100 men whom we examined minutely, and many hundreds whom we observed in passing, not one could be technically described even as "dark-white." Nearly three centuries ago John Leo referred to the "Affricani bianchi" ; and it is a striking example of human perversity that his translator Pory should have rendered the epithet as "tawny," and that the Algerian Berbers should still frequently be spoken of as a "brown" race.

The prevalence of blondness.

The question of the prevalence of blondness among the Berbers of North Africa has attracted much attention.§ Tissot and Faidherbe are the chief authorities on the subject. In 1876 Tissot stated|| that his experience, confirmed by that of Sir John Drummond Hay, showed that the blonds of Morocco numbered fully a third of the entire population. Further, he considered this estimate to be below the mark as regards the Berbers, since it was formed on a mixed population including dark non-Berber stocks. The true proportion, in his opinion, was to be judged rather by the Riffian colony in

* It need hardly be remarked that the Touâregs are pure Berbers.

† Lyon, *Travels in North Africa*, 1821. Cf. the passing remarks of Barth on the Amóshagh, *Travels in Africa* chaps. x. xiii. and xiv. Similarly von Bary describes a Touâreg chief as "très blanc de teint."

‡ Let the whitest-skinned of Europeans constantly expose his arms and neck say to an Egyptian sun for a few weeks only, and he will quickly realise how much difference is made by mere sun-colour.

§ See for a résumé of the subject, Ripley, *Races of Europe*.

|| *Revue d'Anthropologie* for 1876, "Les monuments mégalithiques du Maroc et les populations blondes du Maroc" ; cf. the comments by Broca in the same number.

Tangiers, in which two-thirds of the individuals were blond or fair ("blond et châtain").* This is very positive; as an antidote to it may be quoted the statement of Rohlf's: "I am sure that no one has travelled about Morocco more than I, and I never but once found a light-eyed and fair-haired man."†

It is easier to overlook than to observe; Tissot, from his position, had every opportunity of knowing, but the opinion of such a man as Rohlf's is not to be lightly set aside. It is obvious at any rate that there is a conflict of evidence. We should be the more ready to believe Tissot implicitly were it not that his statement with regard to Algeria‡ (*Géographie de la Province romaine d'Afrique*) is almost certainly inaccurate. But he was apparently dealing with second-hand material in the case of Algeria, whereas he spoke as an eye-witness about Morocco. It is very much to be regretted that the difficulty of penetrating among the Berber tribes of the latter country has prevented the acquirement of more definite information.

On the other hand, Faidherbe's remarks about the Berbers of Algeria§ are admirable. With regard to blondness he wrote: "Nous reconnaissons, au milieu d'une grande majorité au cheveux et aux yeux noirs, un certain nombre d'individus aux cheveux blonds ou châains et aux yeux bleus ou au moins de teinte claire. . . .|| La proportion des blonds aux bruns pourrait être moyennement et 'grosso modo' évaluée au dixième. Elle varie d'un tribu à l'autre." This corresponds precisely with our own observations. The proportion of blond or fair individuals certainly varies very perceptibly in different districts, but in making a general estimate of the country we had passed through we put it down at roughly 10 per cent; this was before leaving Algeria and before we had read Faidherbe's paper.

The tables which accompany this chapter give the exact statistics as far as concerns the 107 men whom we measured. As, however, it is desirable to have an estimate over a larger number and the different places varied a good deal, it may be as well to give extracts from our journals showing what was our opinion with regard to various villages when on the spot and free from any preconception or theory.¶

* "Les deux tiers de la colonie rifaine établie à Tanger se composent d'individus appartenant aux types blond et châtain. Le dernier tiers présente un type brun qui rappelle celui du sud-ouest de la France."

† Quoted by Ratzel, *Hist. of Mankind*, vol. iii. p. 245. We have been unable to trace the original passage.

‡ "Les blonds sont nombreux dans la grande Kabylie et dans l'Aurès. On cite des tribus dont tous les individus naguère encore appartenaient à ce type." We find it very hard to believe this last sentence.

§ *Aperçus ethnographiques sur les Numides*.

|| The omitted sentence merely refers to Morocco.

¶ These are ocular impressions, independent of, though no doubt a little influenced by, our observations on the men whom we measured.

El Arbaa.—"The predominant features are black (brown-black) hair, hazel or brown eyes, a fair skin always a good deal sunburned where exposed, and broad faces. Of a group of twenty men no less than four were perfectly blond. We saw no single man who would be classed as an Arab" *

Bou Zina.—"Were struck with the uniformity of type as far as skin, hair, and eyes go. The most noticeable variation was in the breadth of the face, some (probably the majority) being quite broad-faced, and others quite narrow-faced. Also the noses varied greatly. With regard to colour the combination of black hair with brown or hazel eyes and fair red-white skin was so constant as to be a well-established type, from which the blond hair and blue eyes are the exception."

El Baali.—"Suspect a Roman influence here,† notably in the one or two broad-headed men, who had at the same time Roman features. Colouring in general and hair same as in other Chawía villages. No blond men here."

"The general type in all the villages that we have visited is homogeneous. We see not the least reason for saying, as a French writer does, that El-Arbaa shows a markedly different type from other villages."

Ighil Ali and Tazaïrt.—"Judging from this village the race-stock is certainly identical with the Chawía; and in this village they seem to be neither darker nor lighter on the whole than the Chawía. As in the Aurès all are white-skinned, and there is a considerable proportion of fair-haired people, some being blond. A good deal of variety in noses; most of them show the element of nose No. 1, but few have it pure; there are a good many slightly curved and a fair number of concave. We had one or two cases of curly hair, but the normal type of the Aurès (straight or with a slight wave) prevails."

On the road from Tazaïrt to Gelaa.—"We passed a number of fair men amongst the people on the road to-day, and they certainly seemed to be in the preponderance."

Gelaa.—"As to type the people are the same that we have noted both among the Chawía and at Ighil Ali, but certainly seem to average fairer. We estimate that quite half the population has brown or blond hair." ‡

With regard to other villages no special entry was made in our journals. Those

* This was especially noted, as El-Arbaa was the first Berber village that we visited. Hereafter the observation is omitted as superfluous.

† It was in the Wed Abdi near Menâa.

‡ The theory that renegade Europeans have sensibly altered the type of race in North Africa generally is palpably absurd; but they may have had some influence on Gelaa which has always been a sort of city of refuge.

that have been remarked on may be regarded as fairly typical of the whole number.

For the measurements of head and limbs the reader is referred to the tables which follow. We will do no more in this place than point out that the cephalic index in spite of considerable variations falls normally just on the border line between mesati-cephalic and sub-dolichocephalic. The measure-
ments and tables.

A word must be said here about the measurements taken, the degree of accuracy to be expected from them, and the methods on which they are tabulated.

The measurements taken on the head and face may be trusted to be as accurate as a good instrument, careful observation, and unusually favourable conditions of work, can make them. With regard to manipulation the callipers* were allowed to work fairly easily, one end against the head of the man, the other lightly grazing the skin. For two measurements, however, the callipers were pressed right home; these were the bigonial breadth and the bizygomatic breadth, where the flesh and skin would otherwise disproportionately enlarge the dimensions.

The stature and the length of the limbs are, for reasons which any field-anthropologist will readily appreciate, far less accurate; indeed we should hardly like to call them more than approximate, though they were taken with the greatest care which the circumstances allowed. But an uneven floor disturbed the estimate of stature, the folds of a burnous hindered the span of the arms; and sometimes a garment, of which its owner refused to divest himself, made it impossible to quite accurately judge the height of the shoulder. Such as they are, however, the anthropologist will probably be grateful for these limb measurements, as it is likely to be many years before laboratory methods can be used by travellers. The degree of error varies in the different places we worked at; probably it is never more than plus and minus 4 millimetres, sometimes it is certainly less.

In Tables I.-VI. inclusive the head-measurements are set out according to a principle which has been explained at length in a paper by one of the present authors published in the *Anthropological Journal*.† Its object is to substitute a more intelligible and a more efficient method of tabulation for the cumbrous lists and the ambiguous binomial curves which are ordinarily employed. Two dimensions are included in each table; in Table I., which may be taken to illustrate the case, they are the maximum length

* Flower's craniometer was used.

† *Recent Anthropometrical work in Egypt*, Journal of the Anthropological Institute, vol. xxx. (new series, iii.).

and the maximum breadth of the head. A quadrilateral chart is made embracing the whole area, within which the measurements can fall, and is divided up into squares like a chessboard. The figures of the *absolute* measures* are then written along the top (and bottom) and the two sides, the length being put in the side-columns and the breadth along the top (and bottom). There are then as many pigeon-holes as are needed in which to place the specimens, and these pigeon-holes are thus already labelled with the dimensions belonging to them.

The pigeon-holes have next to be filled. Every head (or skull as the case may be) is given its own particular number, a "name-number" as it may be called, and this is reserved for it alone through all the tables of the series; so that all the measurements belonging to any one individual can be found by merely following his number through the various tables. The "name-numbers" are then placed in the squares to which their dimensions assign them. In Table I. there are 57, in Table II. there are 50 specimens arranged on this method.

The diagonals which traverse the squares show the index resulting from the ratio of the two absolute measures, the value of the index being written at the end of each diagonal in the blank column left for that purpose at the top and bottom of the quadrilateral chart.

It will be seen that by this method it is possible to show graphically within a small compass no less than five important points, viz. :—

(1) The absolute length; (2) the absolute breadth; (3) the index resulting from these; (4) the distribution of the specimens according to their absolute dimensions; (5) the distribution of the specimens according to the index.

The first six of our tables are arranged on this principle, Nos. 1 and 2 giving the length and breadth of head with the cephalic index, Nos. 3 and 4 the length and breadth of the upper face† with the resulting index, and Nos. 5 and 6 the length and breadth of the nose with the nasal index.‡

* The omission to record the absolute measures as well as the indices is one of the worst defects of the systems commonly in use. Heads of extraordinarily different dimensions often give the same ratio, and no indication of this fact is given. The same workers who stickle for a fraction of a millimetre in taking measurements think nothing of these monstrous errors and omissions in tabulation.

† We may be called upon to defend the course we have taken in choosing the nasi-alveolar height as one of the factors for the index of the upper face. It has been done quite deliberately in order to obtain an index which is directly comparable with one which can be taken on the skull. It is eminently desirable to have measures which can be thus compared.

‡ In the centre of each of these quadrilateral tables there is a block enclosed within dotted lines. This is intended to show the focus of distribution, and includes one quarter of the examples contained in the table. It has been

TABLE 1.

MAXIMUM LENGTH AND BREADTH OF HEAD [ABSOLUTE] AND CEPHALIC INDICES.

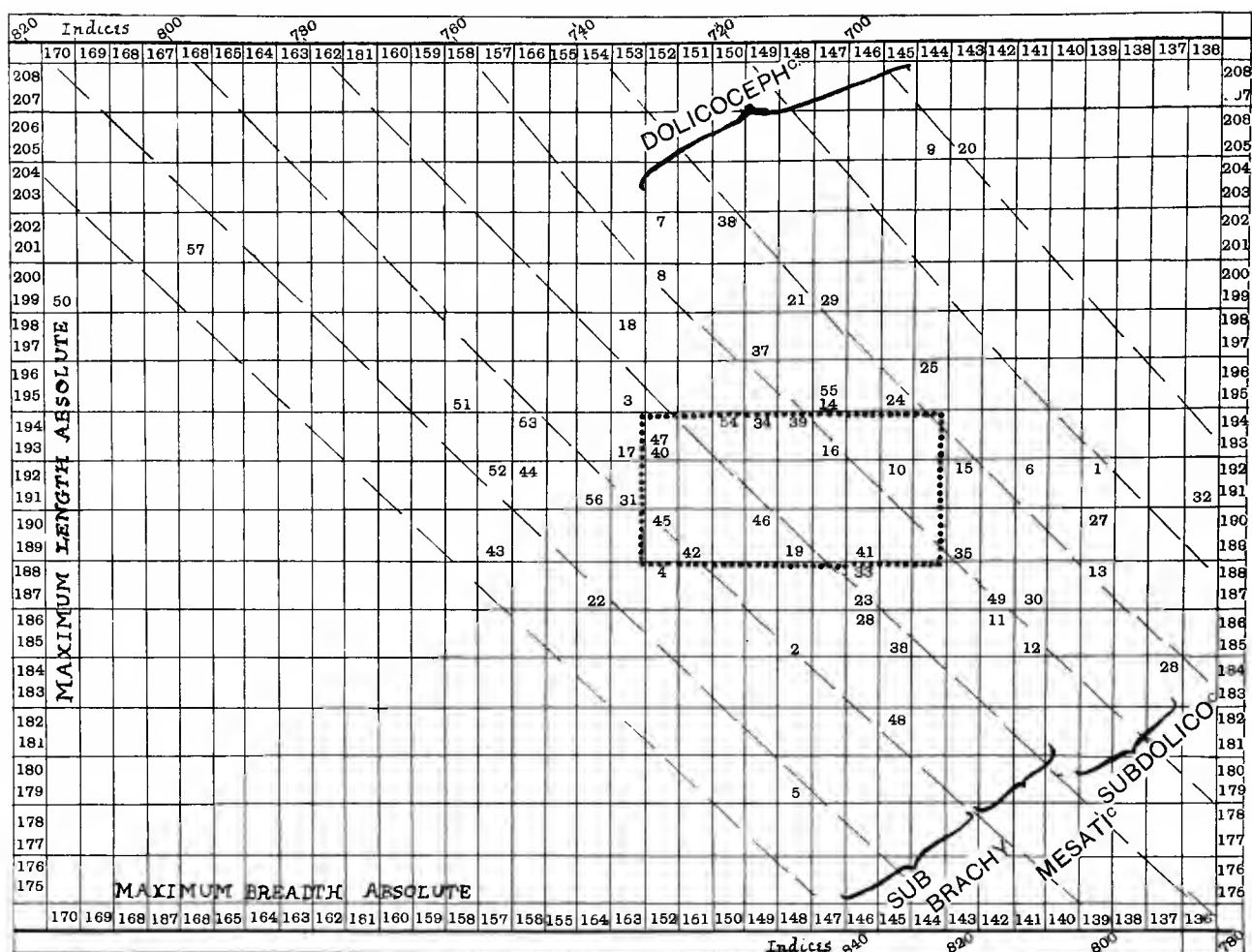


TABLE 2.

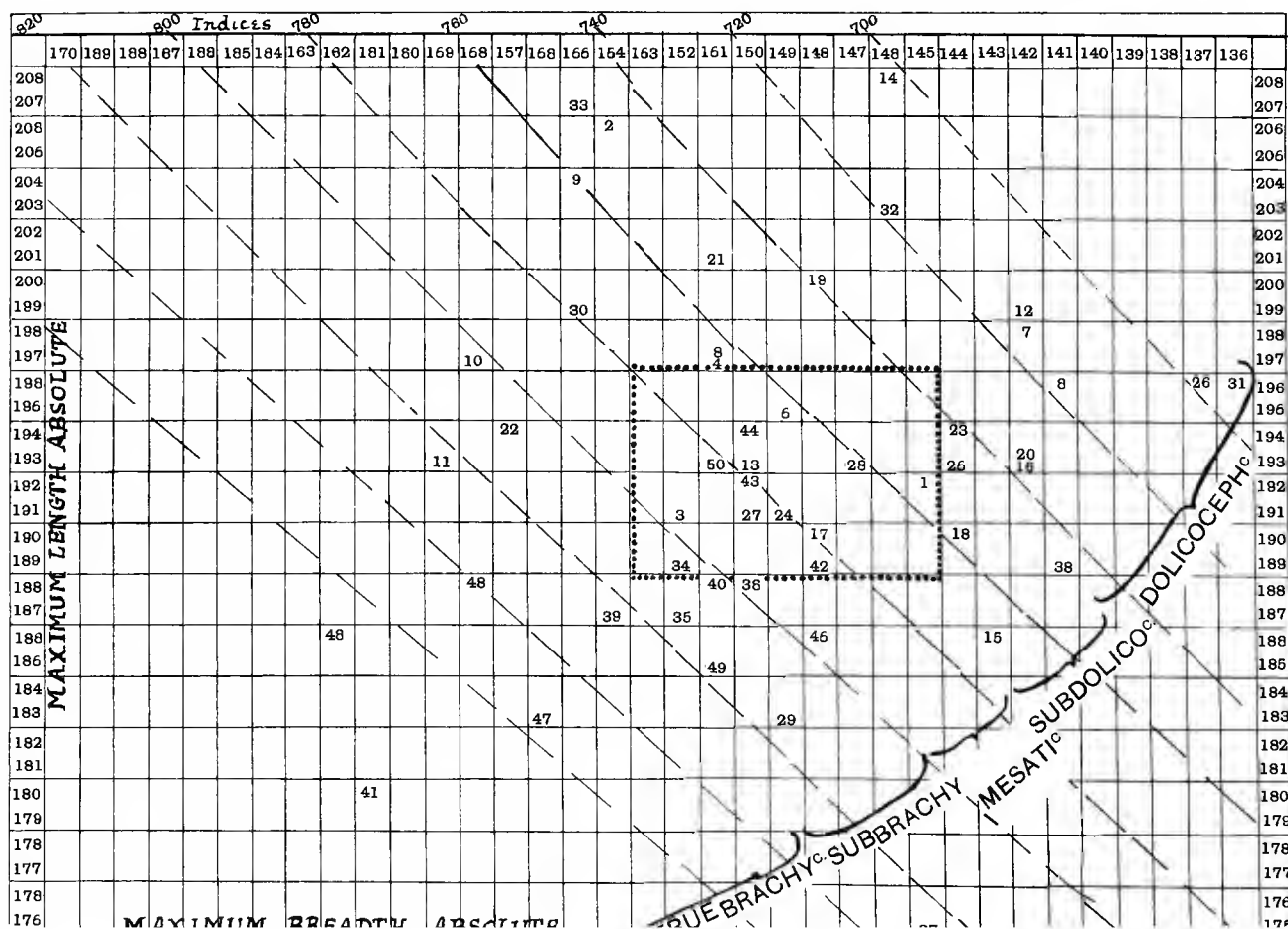
KABYLE MEN.
MAXIMUM LENGTH AND BREADTH OF HEAD [ABSOLUTE] AND CEPHALIC INDICES.

TABLE 3.

CHAWIA MEN.
NASI-ALVEOLAR HEIGHT AND BIZYGOMATIC BREADTH [ABSOLUTE] WITH RESULTING INDICES.

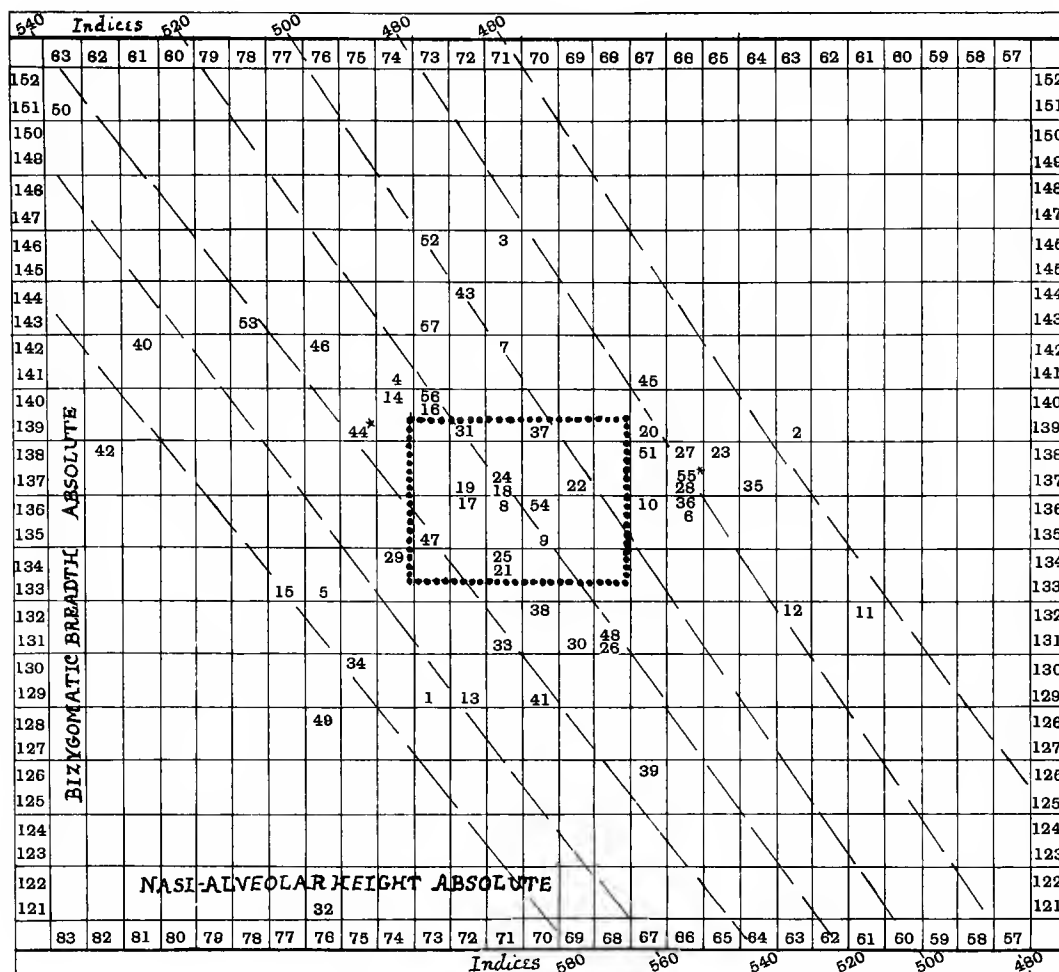
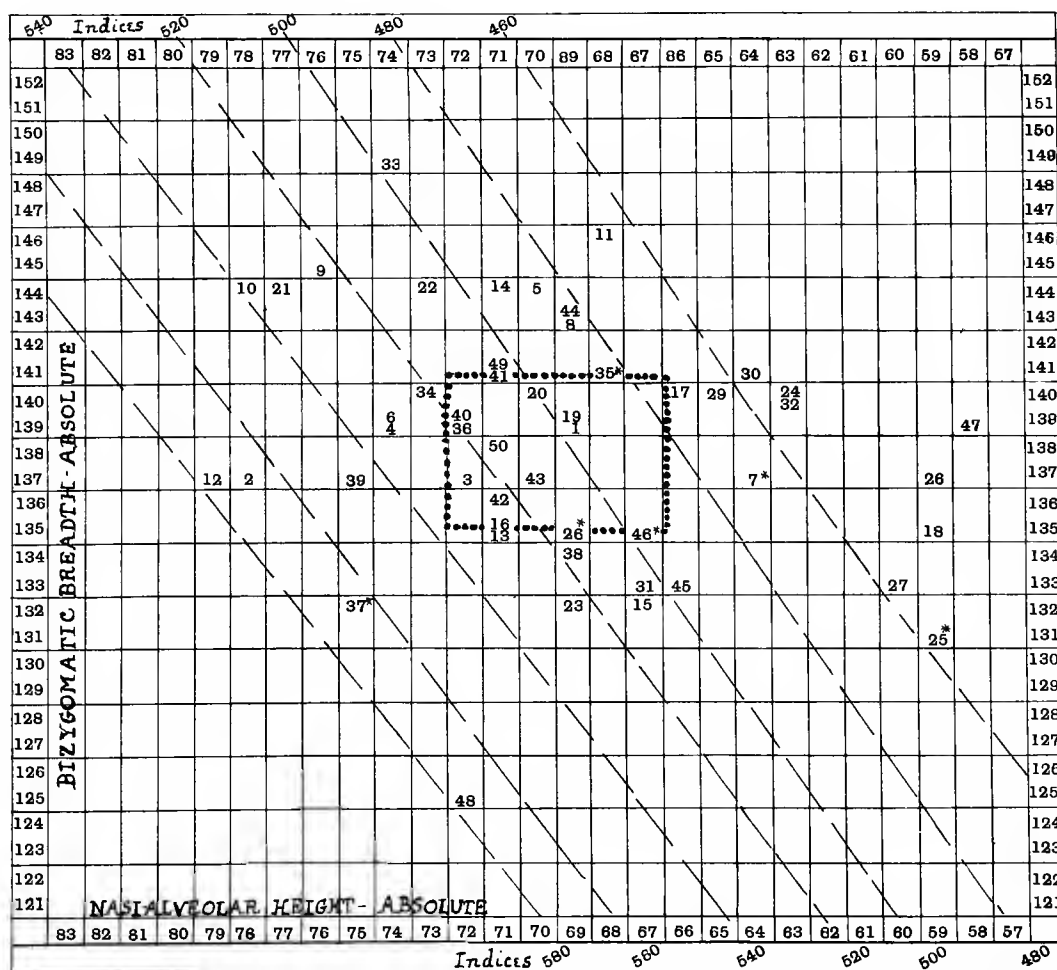


TABLE 4.

KABYLE MEN.
NASI-ALVEOLAR HEIGHT AND BIZYGOMATIC BREADTH [ABSOLUTE] WITH RESULTING INDICES.



* measures approximate only unless otherwise indicated

CHAWIA MEN.

LENGTH AND BREADTH OF NOSE [ABSOLUTE] WITH NASAL INDICES.

TABLE 5.

630 Indices 590													550												
	40	39	38	37	36	35	34	33	32	31	30	29													
62						50							62												
61				1									61												
60						8							60												
59													59												
58										17	32		58												
57						53							57												
56	44							40					56												
55			41	34 16	19						15		55												
54		3			5			4	56				54												
53						14			24	18			53												
52			46	43	42 35 31		37		22	38			52												
51	57		7		55	29							51												
50						48 26	21						50												
49				52		45	47	49		20 13			49												
48		27			6	54	2	33 10	39				48												
47									30				47												
46					12	28						36	46												
45				25 23	51	9							45												
44							11						44												
43													43												
	40	39	38	37	36	35	34	33	32	31	30	29													
							Indices 790 750						710 670												

Nasal Types for Reference

from
"Notes & Queries
on Anthropology"
2nd ed.



KABYLE MEN.

LENGTH AND BREADTH OF NOSE [ABSOLUTE] WITH NASAL INDICES.

TABLE 6.

670		Indices			630		590			550									
		42	41	40	39	38	37	36	35	34	33	32	31	30	29				
62																62			
61																61			
60																60			
59																59			
58									42							58			
57								10			48					57			
56						2				12			37			56			
55				35									36			55			
54			41							40						54			
53						49	50 21 6	5		4						53			
52				34	19	22	44 9 3		39	8	20					52			
51							23		7							51			
50					38			1				13				50			
49						26				33						49			
48								14			46	45				48			
47				17 11					31							47			
46								43								46			
45									24		28					45			
44	25				47			32	29	30						44			
43											15					43			
42								18								42			
41						27										41			
		42	41	40	39	38	37	36	35	34	33	32	31	30	29				
Indices																	790	750	710



TABLE 7.

CHAWIA MEN

VARIOUS MEASURE-
MENTS, COLOURS OF
EYES AND HAIR.

Name Number	Nasal Type	Buccal Height	Biacromial Breadth	Colour of Eyes	Colour of Hair	Stature	Sitting Height	Height from Ground	Height from Ankle	Height from Shoulder	Max. Span	Age
1	12	125	104	LBR	BLK	630	880	590	380	727	37	
2	45	109	106	HZL	BLK	730	920	640	430	740	40	
3	1	127	107	HZL	BLK	700	900	570	400	720	60	
4	14	116	109	HZL	BLK	570	830	610	310	550	50	
5	13	113	110	HZL	BLK	670	860	630	390	670	50	
6	113	122	111	LHZL	BR	655	860	590	370	720	25	
7	15	112	108	HZL	BLK	765	920	660	450	841	40	
8	4P	128	96	HZL	BLK	715	880	540	370	830	50	
9	113	114	107	BRN	BLK	630	880	575	360	735	20	
10	1	115	103	LBR	BLK	630	840	640	360	695	21	
11	135	112	98	LBR	BLK	675	850	600	360	760	21	
12	7	111	101	G	BLK	—	—	—	—	—	16	
13	15	122	101	LBR	BLK	725	835	540	330	820	20	
14	115	125	107	DBR	BLK	690	875	630	410	770	24	
15	12	128	100	BR	BLK	625	875	640	390	720	21	
16	12B	121	98	DBR	BLK	680	900	655	385	685	39	
17	4	123	106	BR	BLK	750	900	620	425	840	23	
18	1	121	100	HZL	BLK	640	860	610	330	710	35	
19	12	117	112	HZL BR	RBR	700	850	640	400	740	35	
20	1CX	118	103	LBR	BL	790	910	655	460	780	28	
21	115	122	95	BR	BLK	740	950	630	420	795	20	
22	1	119	111	BR	BLK	745	925	630	420	800	35	
23	5	106	115	BR	BLK	845	870	550	340	795	21	
24	1B	116	113	DBR	BLK	—	—	—	—	—	15	
25	3	126	100	BR	BLK	735	890	590	400	850	20	
26	1B	118	107	DBR	BLK	680	880	580	365	760	25	
27	3	124	98	DBR	BLK	730	910	625	450	785	25	
28	188	111	97	HZL G	BLK	690	870	620	380	745	30	
29	115	123	99	HZL BR	BLK	755	920	660	440	850	25	
30	1	123	101	BR	BLK	745	880	615	420	860	20	
31	15CX	123	106	HZL	BLK	860	930	660	550	900	30	
32	24P	130	96	BR	BLK	720	865	630	410	780	25	
33	35	120	97	DBR	BLK	690	830	575	390	800	24	
34	35	132	100	BR	BLK	690	925	550	340	740	25	
35	1	113	107	HZL BR	BLK	680	890	590	350	650	26	
36	188	112	100	HZL	BLK	730	865	580	400	725	30	
37	1	125	105	BR	BLK	760	920	620	410	805	25	
38	13	115	97	BR	BLK	765	910	580	360	780	20	
39	15CX	116	100	BR	BLK	700	900	600	390	820	20	
40	1B	126	106	BR	BLK	590	850	580	300	590	45	
41	45	122	96	BR	WH	660	840	570	400	730	70	
42	15CX	135	106	BR	BLK	665	860	540	410	710	45	
43	14	120	111	HZL	BLK	685	870	610	400	670	40	
44	113	138	112	LBR	BLK	765	910	655	485	735	44	
45	1	116	105	LBR	BLK	690	940	590	380	695	30	
46	145	126	116	BR	BLK	775	910	690	495	785	35	
47	113	126	106	BR	BLK	660	855	655	450	665	35	
48	15CX	118	110	BR	BLK	655	850	640	410	670	35	
49	3	120	106	LBR	BLK	660	860	610	385	680	30	
50	14	136	110	BR	BLK	710	885	600	440	730	35	
51	15	121	104	DBR	BLK	785	950	610	440	770	22	
52	114	122	110	BR	BLK	670	885	600	390	725	21	
53	1CX	132	110	LGN	BLK	780	860	650	500	755	45	
54	1B	115	104	BR	G	—	—	—	—	—	55	
55	1B	115	113	BR	G	—	—	—	—	—	50	
56	4	123	103	BR	BLK	—	—	—	—	—	45	
57	1B	126	106	BR	BLK	—	—	—	—	—	30	

TABLE 8.

KABYLE MEN

VARIOUS MEASURE-
MENTS, COLOURS OF
EYES AND HAIR.

Name Number	Nasal Type	Base Height Throat to Ankle	Biacromial Breadth	Colour of Eyes	Colour of Hair	Stature	Sitting Height	Height from Ground to Knee	Height from Ground to Shoulder	Max. Span	Age
1	1 ⁵ CX	117	106	BR	BLK	620	870	580	300	625	28
2	11B ⁵	130	102	LBR	BLK	750	950	595	450	710	35
3	165B	125	102	BR	BLK	720	900	620	410	780	25
4	122	127	102	BR	BLK	670	890	565	370	695	40
5	122	122	110	BR	BLK	720	920	640	410	700	28
6	1 ⁵ CX	122	104	LBR	BLK	740	890	670	450	730	45
7	1B	120	108	BR	BLK	780	905	680	520	820	55
8	1CX	109	108	BR	BLK	730	910	635	430	730	55
9	1P	126	106	BR	BLK	815	980	720	520	810	28
10	12	129	100	LBR	G	670	885	600	380	745	57
11	1B	124	117	GGN	BLK	730	920	570	410	805	25
12	1CVB	130	109	HZL BR	BLK	730	905	630	440	775	28
13	1B	129	101	BR	BLK	665	880	595	360	800	24
14	13	126	115	BR	BLK	760	910	660	475	780	27
15	114	128	104	DBR	BLK	610	905	580	315	640	25
16	1	116	105	BL GR	BR	710	890	630	435	780	25
17	15	108	95	BR	G	685	885	690	420	685	50
18	3D	106	107	LBR	BLK	550	815	580	270	530	35
19	1 ⁵ CX	117	97	BR	BLK	630	860	580	290	660	24
20	115	123	105	DBR	BLK	700	930	580	350	665	25
21	1B	133	110	DBR	BLK	720	925	625	425	780	30
22	2B	122	109	BR	BLK	730	913	620	420	780	28
23	3	115	105	BR	BLK	670	870	580	380	760	24
24	3	117	106	BR	RBR	680	910	590	370	700	24
25	1FB	103	102	BR	G	615	860	600	340	610	60
26	2	—	99	BR	G	665	865	660	390	640	65
27	17	112	104	BR	BLK	645	870	570	320	700	28
28	114B	106	109	BR	RBR	805	940	705	510	800	24
29	115	110	97	DBR	BLK	600	850	590	310	610	35
30	1B	119	101	LBR	BLK	580	890	530	250	520	25
31	1B ⁵ CX	123	106	LBR	DBR	720	875	600	415	800	35
32	37B	120	111	BR	BLK	670	905	580	350	730	22
33	1	124	114	GN	BLK	795	930	660	480	770	30
34	13	122	106	HZL	BLK	670	980	630	360	650	25
35	12	111	108	BR	WH	725	920	600	410	750	50
36	24	120	101	BL	BLK	710	980	600	400	750	25
37	24	125	96	BR	G	700	870	640	400	690	58
38	1 ⁵ CV	118	102	BR	BLK	650	850	580	350	710	28
39	1B	113	113	BR	BLK	815	930	700	500	840	45
40	24	120	111	BR	BLK	680	870	620	380	750	38
41	224	117	102	HZL BR	BLK	670	880	620	370	750	55
42	15	124	96	HZL GN	BLK	615	835	570	320	620	32
43	1	122	106	BR	BLK	660	850	630	370	650	28
44	1 ⁵ CX	117	105	BR	BLK	700	850	630	405	710	33
45	1 ⁵ CX	107	100	BR	BLK	520	820	550	230	530	25
46	1 ⁵ CX	118	102	BR	WH	680	870	620	400	690	55
47	12	108	111	BR	BLK	630	860	615	350	620	26
48	14	121	96	HZL	BLK	720	870	610	390	710	27
49	115	120	107	BR	BLK	620	850	540	320	690	25
50	12	124	107	HZL	BLK	650	835	610	350	700	23

* Approximate only

various
scintils

Notation of Nasal Types

The figures 1-8 are used to denote the nasal types of "Notes and Queries", which are reproduced on the opposite page. When one of these figures is repeated several times and associated with another this means that the nose is compounded of several types, in which the predominant factor is that which is repeated.

Additional signs are

s = slightly

CX = Convex

CV = Concave

B = Blunt pointed

D = Depressed

F = Flat

P = Prominent

Notation of Colours

BR = Brown

LBR = Light Brown

DBR = Dark Brown

GN = Green

GGN = Grey-Green

HZL = Hazel

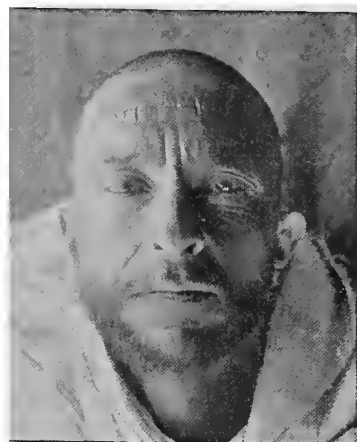
BL = Blue

BLK = Black

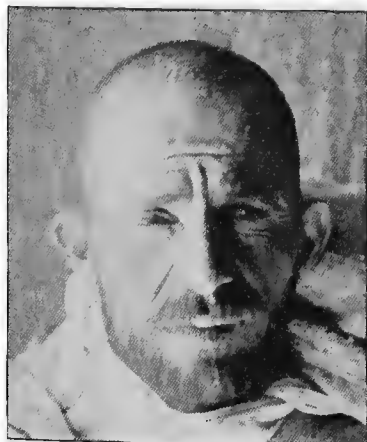
G = Gray

R = Reddish

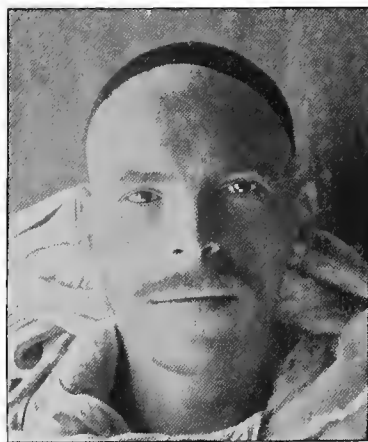
HAWIA OF BOUZINA AURÈS.



16.



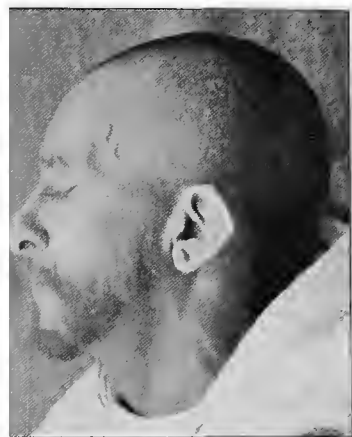
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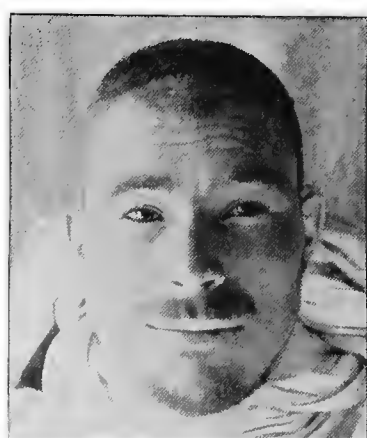
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17.



18.



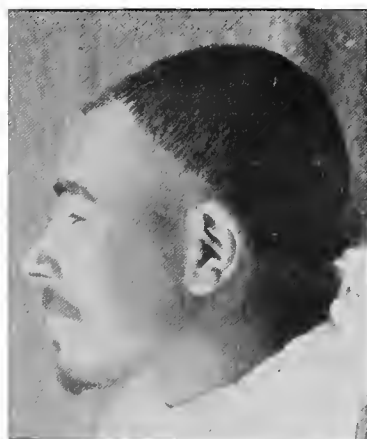
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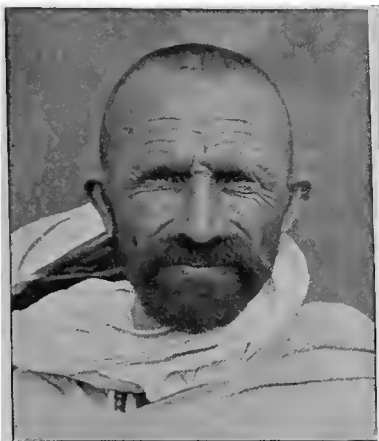


41. (P)



15.





43.



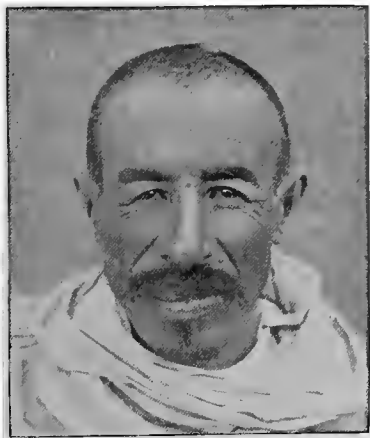
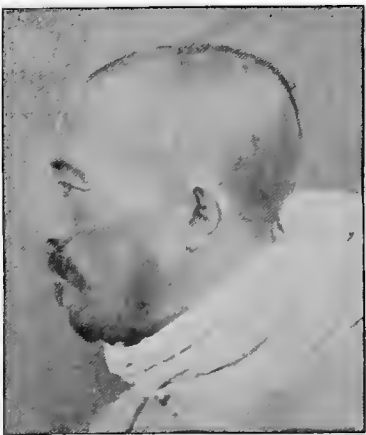
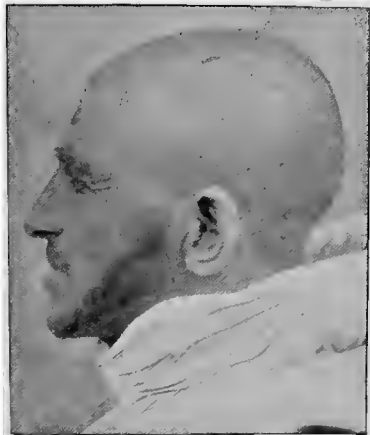
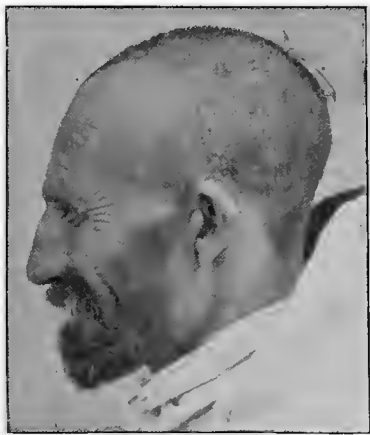
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48.



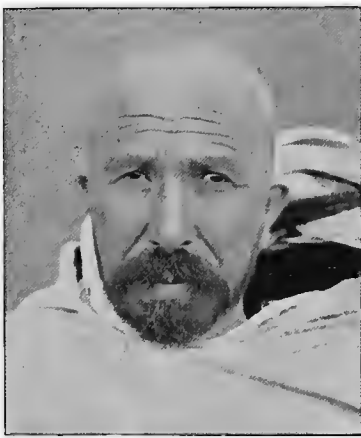
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44.



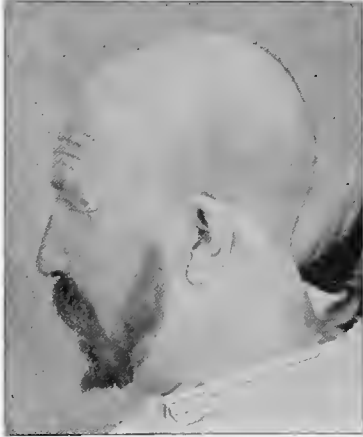
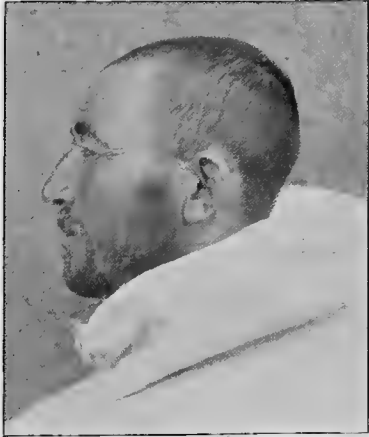
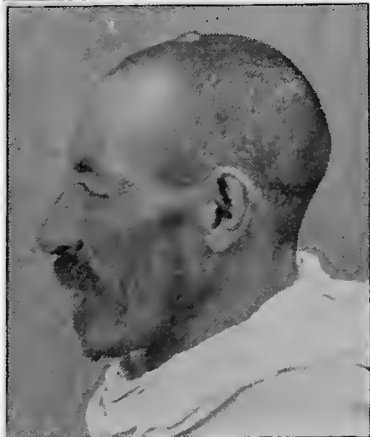
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42.

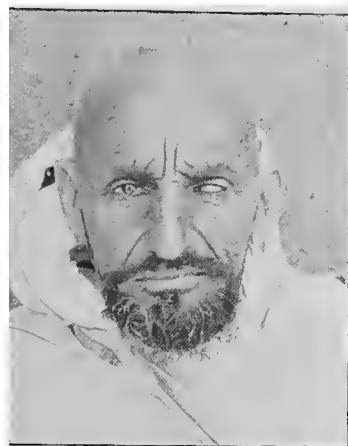


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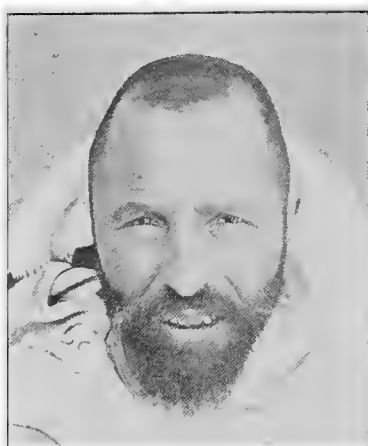


A KABYLE OF TAZAÏRT
AND IGHIL'ALI.

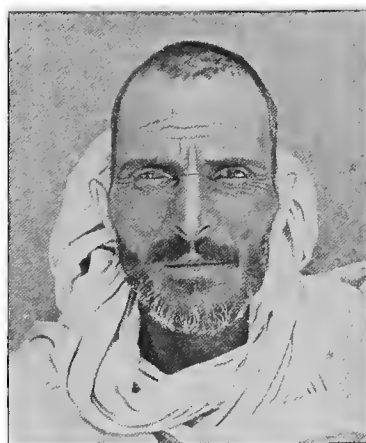
ABYLES OF TAZAÏRT AND IGHIL'ALI.



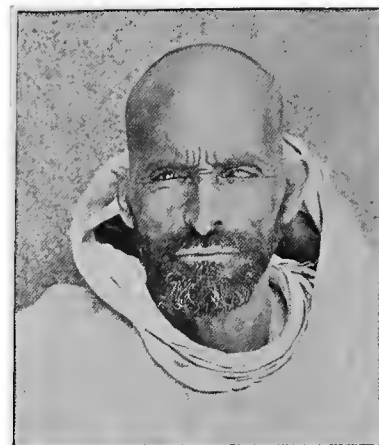
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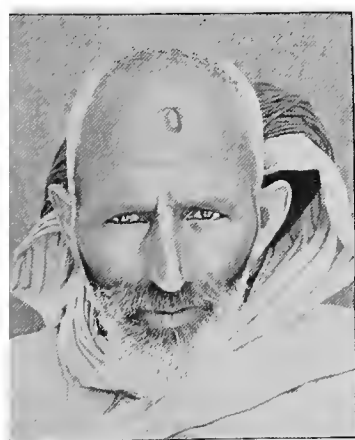
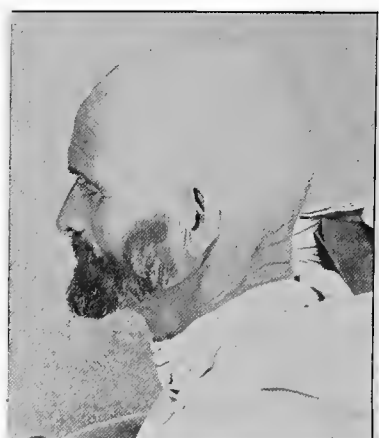
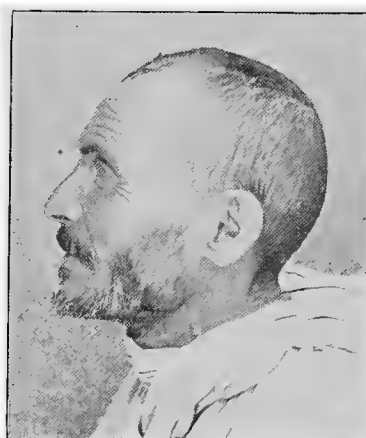
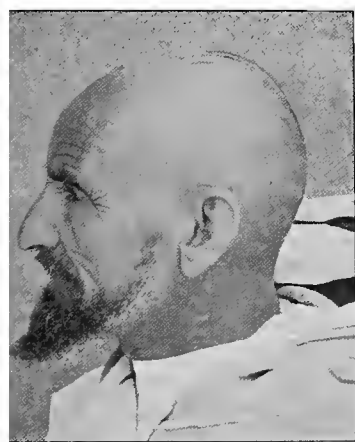
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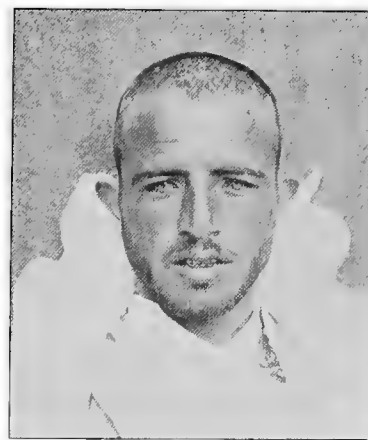
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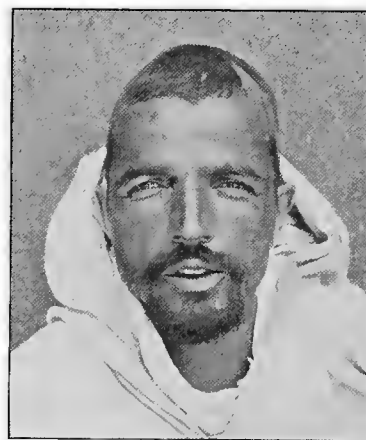
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10.



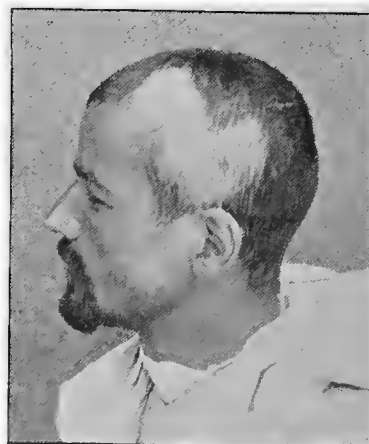
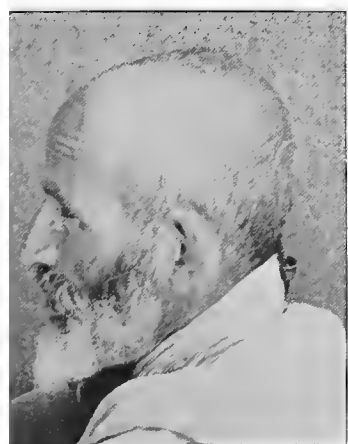
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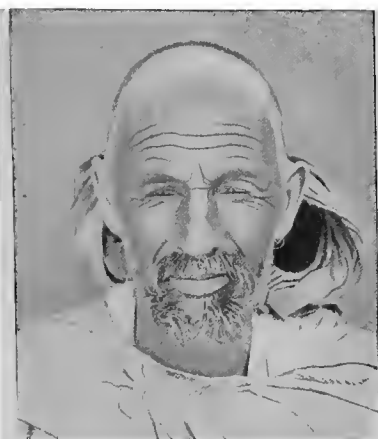


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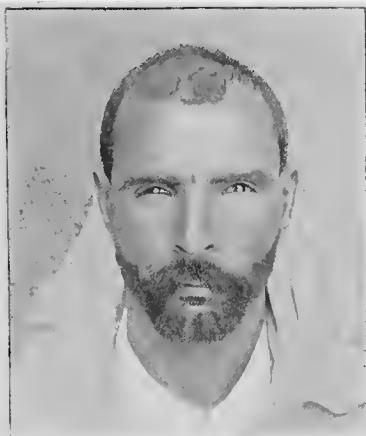


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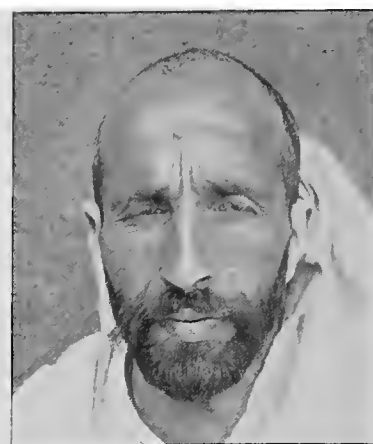
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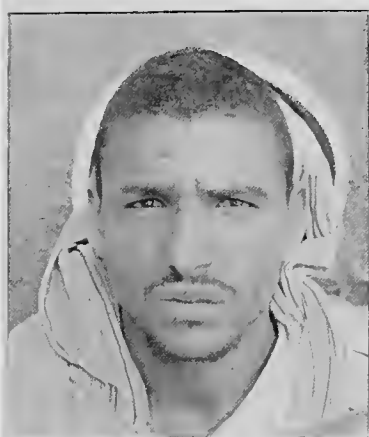
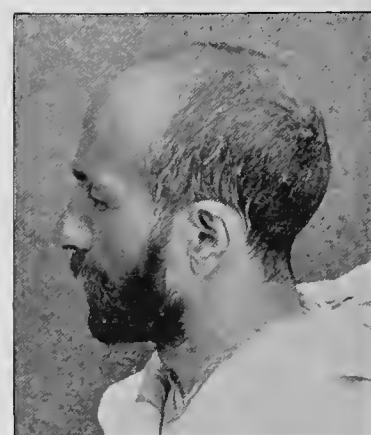
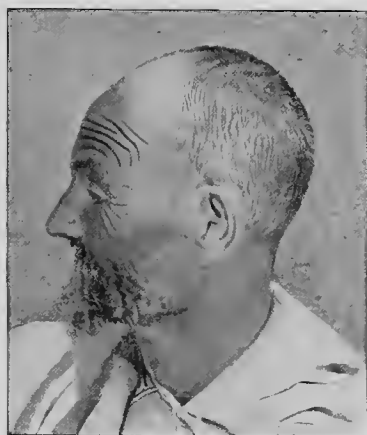
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15.



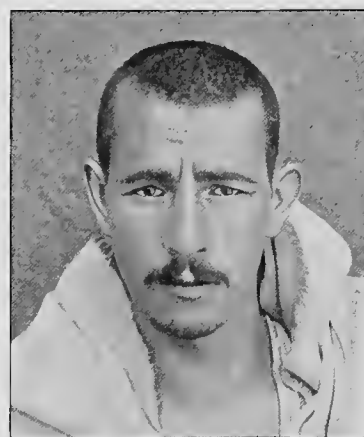
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14.

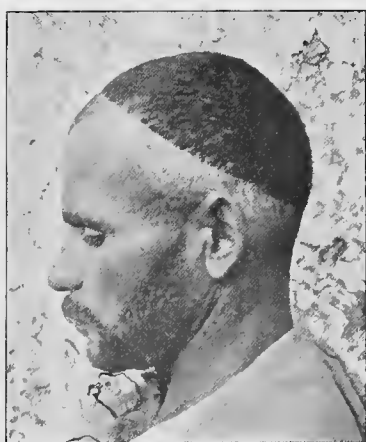
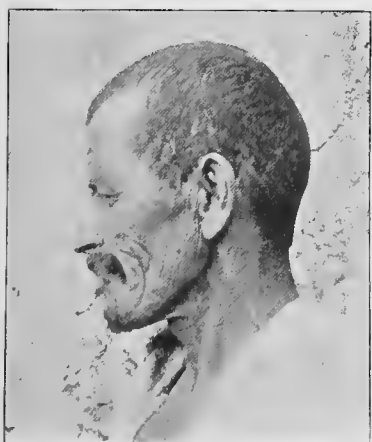
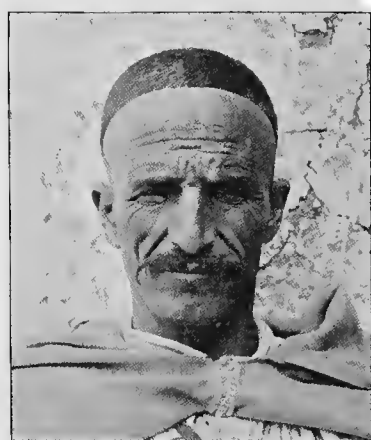
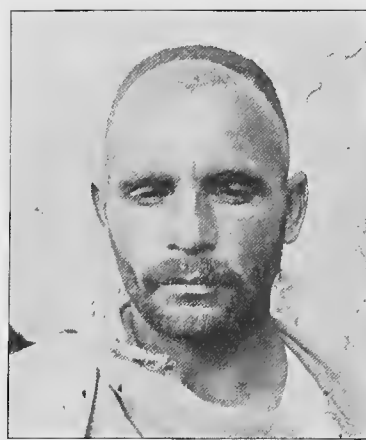
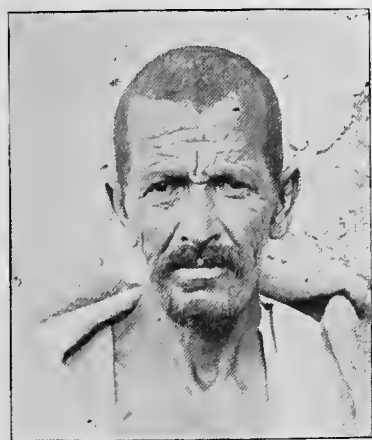
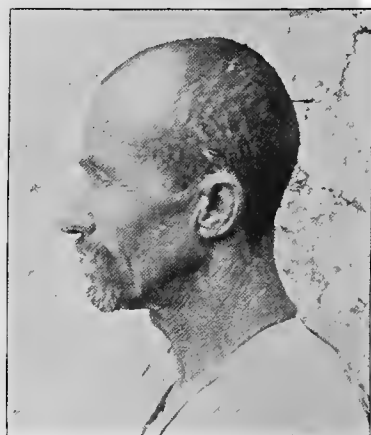
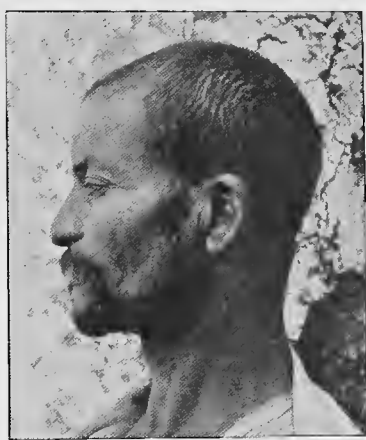
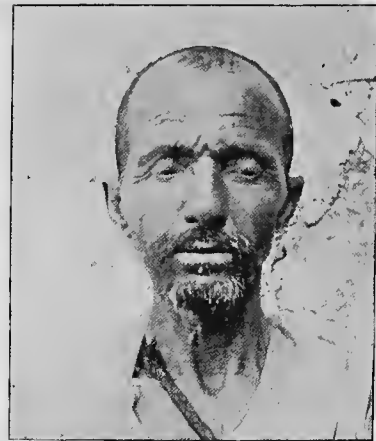
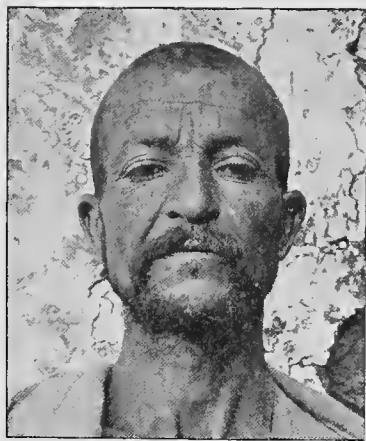


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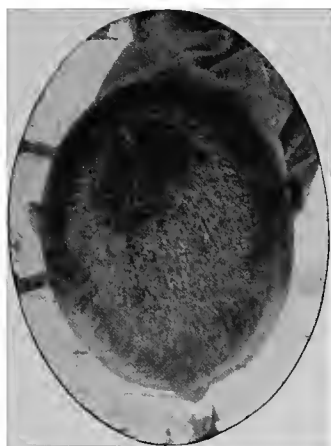


13.

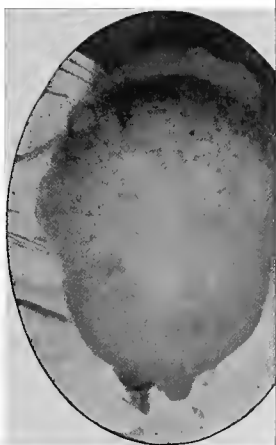




HEADS OF BERBERS—VAULT VIEW.



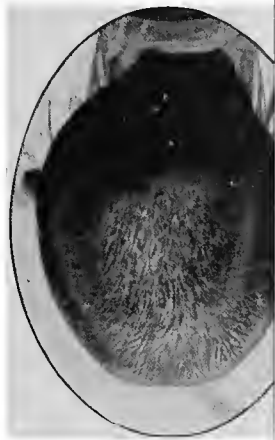
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B



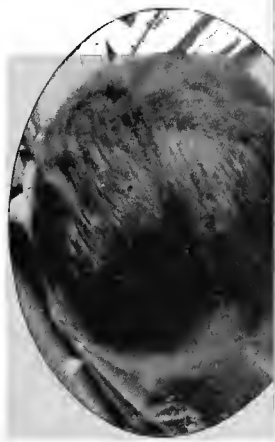
G



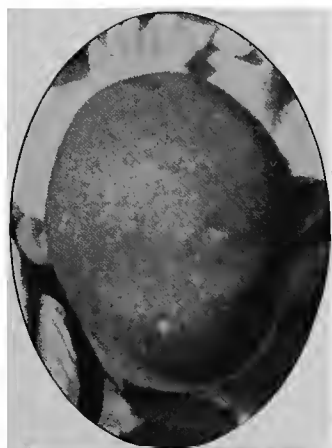
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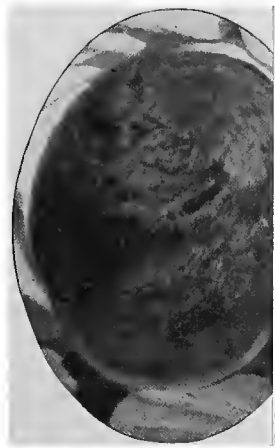
O



P



U



V

In Tables VI. and VII. are given in serial form the two remaining facial measures (viz. facial height from nasion to chin, and bigonial breadth) which it was not convenient to treat by the method of the quadrilateral chart. In the same two tables are included the observations on eyes, hair, and form of nose, and the five limb-measurements which we considered to be worth taking.* The nasal types which are used as standards have been reproduced at the side of the tables in order to facilitate reference.

The provenance of the various specimens is as follows :—

<i>Chawia.</i>	<i>Kabyles.</i>
Nos. 1-9 are from El-Arbaa.	Nos. 1-32 are from Ighil Ali and Tazaïrt.
Nos. 10-41 are from Bou-Zina.	Nos. 33-50 are from Tamaosht.
Nos. 42-57 are from El-Baali.	

The portraits shown in Plates XX.-XXV. were taken at the same five places. Some of them represent individuals who appear in the measurements; in this case they are labelled with their respective numbers. Of these which are not numbered the great majority were not measured; one or two enter into the tables of measurement, but their identity has been lost. Plate XXV. exhibits the vault view of twenty-four heads of Berbers.† We would call particular attention to the photographs in this plate, as, though they are not by any means technically perfect, they constitute a new departure in method. The vaults of the heads are exactly what are wanted for comparison with the crania of ancient races, and photographs are an invaluable supplement to measurements. The orientation of these specimens is such as always to show the occipital point; sometimes the nose appears, sometimes it is hidden, that depends entirely on the shape of the head.‡

well objected that as this focus is practically in the centre of the table (being obtained by excluding an equal number of specimens on each side vertically and horizontally) it is quite artificial. It must be admitted that while it would work perfectly in tabulating the measurements of a pure race, yet in ordinary cases it does not express the true mathematical graduation. It corresponds to a symmetrical but not to an unsymmetrical binomial curve. This central block is, however, a quite unessential feature of the tables, and can easily be disregarded by those who do not approve of it.

* Viz. stature; sitting height; height from the ground to the tip of the second finger; height from the ground to the shoulder; maximum span from end of second finger of one hand to end of second finger of the other.

† Chawia and Kabyles, but all except three or four are Chawia.

‡ These vaults were taken with a turning-table on the camera, so that the lens was pointed directly downwards, and the subject sat on the ground underneath it. One of the operators then got on to several chairs and focussed, while the other held the head in position and indicated the occipital point with his finger. The focussing is sometimes incorrect, as the victims were very restive.

CHAPTER XIV

CONCLUSIONS DERIVED FROM THE CRANIOLOGICAL EVIDENCE

THE PREHISTORIC EGYPTIANS WERE NOT LIBYANS

IT has now to be considered what light this new material throws upon the ethnological connections of Libya. In treating of this question we assume, as is invariably done, that the modern Berbers are the descendants of the races which were known to the Egyptians of the nineteenth and twentieth dynasties, and to the Greeks and Romans, under the generic name of Libyans. Secondly, we assume that the Chawía and Kabyles of Algeria may be considered as typical representatives of this stock. The problem to be dealt with may be thus stated—of what kind was the connection between Libya and Egypt, not at the later period when the Berber hordes threatened the kings of the nineteenth and twentieth dynasties, but in the very early days of the prehistoric* Egyptians?

It has already been shown that in respect of culture there are many and close resemblances between the prehistoric Egyptians and the Libyans. But it cannot be too strongly maintained that connection of culture gives little or no ground for inferring identity of race ; indeed, the wider the area over which any given type of civilisation is spread the less likely does it become that the various peoples who are subject to its influence are ethnologically identical. The close interrelation of their culture justifies us in *inquiring* whether the early inhabitants of Egypt may have been Libyans, but this is all that it can be allowed to do ; it cannot appreciably influence, much less finally determine, the decision of the question.

The problems of identity and difference of race belong properly to the student of

* In this chapter, as in all other places, unless a special distinction is made, we use the term "prehistoric" to include the entire period up to the fourth dynasty, though the later stages of it should perhaps rather be called "proto-dynastic."

physical anthropology. Anthropometry, which is the branch of this study that has most nearly attained to any considerable degree of exactness, may be frequently incompetent to fulfil the functions assigned to it, but in some cases it can give a clear answer, and in *all* cases it has a title to be first consulted. What then has anthropometry to say on the question whether the prehistoric Egyptians were or were not Libyans? The answer is most definite and explicit. The prehistoric Egyptians were a mixed race, the component elements of which it is difficult to analyse with exactness, but *this mixed race as a whole was not Berber*.

The ground on which we base this somewhat unexpected conclusion is chiefly and in the first place the cephalic index, which, if dethroned from the position of infallibility which it once held, yet remains the most valuable of criteria when employed with a proper discrimination. For while it is true that the proportion of the length to the breadth of the head, which is expressed by the cephalic index, may sometimes yield identical results or races which more detailed supplementary observations prove to be wholly unrelated; yet it is impossible to maintain that two peoples are ethnologically related if the cephalic index reveals conspicuous differences between them in respect of the breadth of the head. In brief, the negative value of this test is incomparably greater than its affirmative value. It is the strongest of allies to one who is criticising, the weakest of all to one who is seeking to establish a theory of connections.

At this point may be inserted a comparative table of the measurements to which reference is about to be made.

[TABLE

LIBYAN NOTES

	♂ Cephalic Index.	♀ Cephalic Index.	No. of Examples (approximate).	♂ Nasal Index.	♀ Nasal Index.	No. of Examples (approximate).
<i>Prehistoric Egyptian—</i>						
<i>General Period.</i> Nagada	718	...	80	530 and 550	...	...
Hou	721	743	♂ 137 ♀ 147	501	520	♂ 125 ♀ 137
<i>Early Period.</i> Abydos	712	706	♂ 20 ♀ 26	500	489½	♂ 12 ♀ 18
<i>Late Period.</i> Abydos	719½	747	♂ 22 ♀ 33	491	490	♂ 13 ♀ 29
<i>Fourth Dynasty Egyptian.</i> Medum	760	...	24	48	...	...
<i>Fifth Dynasty Egyptian.</i> Perfect bodies. Deshashch	742	...	10 to 12	47	...	...
Dissevered bodies. Deshashch	763	...	7 to 8	47	...	...
<i>Algerian Dolmens.</i> Rohnia	...	753 { sexes mixed }	18	...	...	...
<i>Berber Skulls.</i> Biskra. (Topinard, <i>El. de l'Anthrop. gén.</i>)	742	771	♂ 33 ♀ 20	...	489 { sexes mixed }	46
<i>Living Berbers.</i> Chawia and Kabyles. (Randall-MacIver and Wilkin)	773	...	107	696	...	107
<i>Kabyles of Palestro.</i> (Prengueber)	764	...	184	665	...	184
<i>Berbers of Biskra.</i> (Quoted by Topinard, <i>op. cit.</i> Measured by various)	767	...	180	...	...	...

Leaving the series of females out of consideration for the moment, it is at once apparent that the cephalic index of the living Berbers whom we examined is strikingly different from that of the prehistoric Egyptians. Of the latter there are four separate series from these different sites, making up a total of some 250 male examples, and all the series agree very closely together. The median index for the prehistoric Egyptian is between 712 and 721, which puts them among the very long-headed races comparable with Melanesians, Australians, Veddahs, Eskimo, and (which is much more important) with the Long Barrow race of England, the prehistoric people of the Beaumes Chandes cavern in France, and the few specimens which have been found at Lake Ladoga.

Our Chawia and Kabyles, on the other hand, show a median index of 773 (Chawia 772, Kabyles 775), which is in close agreement with the mean of 764 obtained by Prengrueber on 184 Kabyles of Palestro, and of 767 resulting from the measurements of various anthropologists on a series of 180 Berbers of Biskra. These three series give a total of 471 specimens, so that in comparing the ancient and the modern Libyan we are dealing with a quite unusually large number of examples on each side, and may fairly consider the results to be representative. Now between 764, which is the lowest index obtained on the Berbers, and 721, which is the highest obtained on any series of prehistoric Egyptians, there is a gulf which cannot be bridged.* With the most liberal allowance for the difference between the living specimen and the skull, the modern Berber evidently falls not into the long-headed, but into the sub-dolichocephalic class, approaching closely to the mesaticephalic.

Again, the mean cephalic index of fifty-three skulls of modern Berbers from Biskra was 742 for the men and 771 for the women. Faidherbe's series from the dolmens gave 753 in a series in which the difference between the sexes was not observed; and if the male and female specimens of the Biskra skulls be grouped together the result is a mean of 750, which tallies well with Faidherbe's, and shows that the suggestion that the Berbers have become more round-headed owing to Roman, Vandal, or even later European influence, is as little confirmed by anthropometry as it is countenanced by history. These measurements upon the skulls are less to be trusted as giving a pure Berber type than are the measurements upon the living, for the dolmens may contain

* Note, we have not even taken the extreme cases to exemplify our view. Probably the 712 of the earliest Abydos series represents the early Egyptian more accurately than the 721 of Hou, which, embracing all stages of the prehistoric period, has probably some of the less long-headed people of the fourth dynasty invasion included. Probably also our median of 773, resulting from measurements taken in the heart of the mountains, gives the Berber type better than the series from Palestro and Biskra, where a slight Arab infusion is to be feared.

other bodies as well as those of Berbers ; and nothing is more likely than a mixture of some Arab examples with the Berber skulls at Biskra. Still, even allowing for such possible defects in the series, the measurements on the skulls give as little support as those on the living specimens to the view of those who would affiliate the Berbers to the early Egyptians ; the difference between 742 and 721 (rather probably 712) is too great to be explained away.

It is curious that the female skulls in the series of prehistoric Egyptians from Hou show an index so much higher than that of the male skulls. But though it is not known with certainty what is the standard variation between the two sexes, yet the measurements that are extant of so pure a race as the Andaman islanders suggest that twenty-two units is not beyond the limits of sexual variation in an unmixed stock ; and it is noticeable that Topinard's series of Biskra skulls shows a sexual variation of no less than twenty-nine units. It is clearly not permissible, therefore, to compare the Egyptian females with the Berber males.

It results that the Berber in no way resembles the representatives of the long-headed races. He is at present, and was also at a period certainly not later than the early Roman Empire, a man with a head which, though narrow in comparison with that of a Celt, a Ligurian, or a Lapp, is far broader than that of the truly dolichocephalic races. He is to be compared not to these, but rather to the ancient Germans of the Reihengräber, and to some of the mixed races of modern Europe.

The cephalic index then absolutely forbids any identification of the prehistoric Egyptians with the Berbers. Such other criteria as can be brought to bear are little less decisive. The alveolar index—unfortunately never quite satisfactory owing to the vicious method employed to express it—places the prehistoric Egyptians among the orthognathous races, judging by the median ; but there are many individual specimens which show a considerable degree of prognathism, and, although we have only our own ocular observations to rely upon for this particular, it may be confidently asserted that the Berber is not prognathous.

The nasal index varies considerably in the two largest series of prehistoric Egyptians, being 530 and 550 for the males of Nagada, and only 501 for the males of Hou. Now it is of course impossible to institute a direct comparison between the nasal index of a skull and that of a living person ; but though the measurement taken is not the same measurement in the two cases, yet the purpose is the same, viz. to discover the ratio of the breadth to the length of the nose. Accordingly, if the class-groupings of

narrow and broad noses be followed, it is possible to compare the results obtained upon the skull and the living head, not indeed by means of figures, but by means of the classes into which these figures are respectively grouped. It will then appear that both the Nagada and the Hou specimens are Mesorhine; although the former are on the border between Mesorhine and Platyrhine, while the latter are in the very centre of the Mesorhine class. On the other hand, the Berbers whom we measured only just enter into Topinard's Mesorhine class;* or, if they are considered as two groups instead of one, the Chawia of the Aurès fall into the Leptorhine, and the Kabyles proper into the lower margin of the Mesorhine. Prengrueber's 184 Kabyles of Palestro are actually quite Leptorhine, with an index of 665. While, therefore, the nose of the men of Nagada and Hou, especially the former, is inclined to be coarse and broad, the nose of the Berber is of a fineness comparable to that of good European types.

The three tests, therefore, which are more valuable for the differentiation of races than any others, the cephalic, the alveolar, and the nasal index, show that the prehistoric Egyptians, so far from resembling the Berbers, are strongly contrasted with them in respect of breadth of head, projection of profile, and breadth of nose.

In face of these results it is impossible any longer to maintain the view that the prehistoric Egyptians were Libyans.†

It may be worth inquiring whether, having ousted the Libyans from their supposed place as inhabitants of Egypt in prehistoric days, we can find any proof of their presence in Egypt at other dates. After the fifth dynasty certainly they never inhabited Egypt in sufficient numbers to alter the racial type of the inhabitants, however many isolated inroads or even temporary occupations may have occurred.

In the fourth and fifth dynasties the case is different; it is a curious fact that the unfortunately rather small series of measurements which are available for this period give results agreeing very fairly with the Berber type, viz. cephalic index 760 or 763, nasal index 480, alveolar index 940 to 960. But the distinction that has been established must here be borne in mind; anthropometry is a powerful instrument when

* Topinard divides the nasal indices of the living into classes as follows:—Platyrhine 1089-891, Mesorhine 814-690, Leptorhine 690-630.

† In a paper published by one of the present authors in the *Journ. Anthropol. Inst.* XXX. (N.S. iii.), the ordinary view which identified the two races was given some countenance. The paper in question was, however, written long before the material considered in the present chapter had become available.

employed negatively, but weak in affirmation. When it shows differences it is incontrovertible, when it attempts to show resemblances it must give way before any strong opposing evidence. And in this case the opposing evidence is very strong indeed. So far from Archaeology allowing even a *prima facie* case for inquiring whether the Egyptians of the fourth and fifth dynasties are racially affiliated to the Libyans, it absolutely denies any such possibility. It is precisely at this period that all traces of Libyan culture vanish; the pottery, the designs, the burial customs are all changed, the potmarks are replaced by hieroglyphs, and a wholly new phase of civilisation appears in Egypt. If it is impossible to find the Berbers in Egypt in prehistoric times, it is doubly impossible to see in them the race that built the pyramids and introduced the hieroglyphs.

One more contingency may be considered. The prehistoric Egyptians at the very earliest period at which they are found were evidently a mixed race. If, then, the country had already experienced various immigrations even before the earliest dawn of the Copper age, may not one of these aboriginal stocks have been of Berber origin? It may be so. The geographical distribution of races and civilisations, as it is observed in later times, might be plausibly explained in this way. The whole of North Africa, from Tangier to Suez, would then have been occupied by a homogeneous Berber stock; which spread over into Syria and was there represented by the fair-skinned Amorites and by the builders of those dolmens, which are so characteristic of the west, and so alien to the genius of Chaldaean and Mesopotamian civilisation. At a slightly later period the connections would be cut by the pushing into Egypt of the long-headed race of Nagada, Hou, and Abydos.

But there is no anthropometrical evidence to support this theory, and until such evidence is forthcoming it must remain a mere suggestion.

CHAPTER XV

GENERAL CONCLUSION

INDIGENOUS AND BORROWED ELEMENTS IN THE CULTURE OF PREHISTORIC EGYPT— POSITION OCCUPIED BY LIBYA IN THE INTERCOURSE OF THE MEDITERRANEAN

THE result of this whole investigation has been to show that Libya and early Egypt were not united by any ties of race ; but that they were in sufficiently close contact with one another or with some common centre to have developed a culture which was in some important respects identical. While, however, too little is known of the early civilisation of the Berbers to permit of stating whether it exhibited any characteristics alien to Egypt, it is certain that the prehistoric Egyptians were acquainted with developments of art of which no trace is to be found in Libya. In order, therefore, to determine the relation in which the two countries stood to one another it is necessary to estimate how much of the artistic production of Professor Petrie's "New Race" may have been borrowed from Libya, or at least from a source common to Libya and Egypt, how much may have been independently evolved, and how much acquired from sources unconnected with North Africa.

It has been shown that at least three of the clearly differentiated classes of "New Race" pottery are to be traced in Algeria. The Red pottery with white ornamentation is practically identical in both countries ; some of the most characteristic forms of the "Late" pottery occur in both ; and in both alike is found a Red ware, which in Egypt is the direct ancestor, not only of the white-ornamented Red but also of the Black-topped ware.

On the other hand no trace is found in Algeria of the Wavy-handled or of the Black-topped pottery ; nor, in spite of an occasional similarity of motive, can the New Race "Decorated" be identified as Algerian.

The Black-topped pottery gives every indication of being a native product of Egypt. It is the lineal descendant of the Red ware, but by an evolution which seems to have been peculiar to the country in which it is found. At some time the accidents of firing must have revealed to the Egyptian potter the special quality possessed by a haematite facing, that a limitation of the access of air will de-oxidise the red to black, while the red of the oxide remains wherever the surface is freely exposed to the air (see *Nagada and Ballas*, p. 37). The use of this peculiar pottery seems to be almost entirely confined to Egypt,* and there can be no doubt that it is an indigenous product.

Equally characteristic of the New Race is the use of a pottery with ledge handles, which in the finest early forms project about an inch from the surface and are marked with a strong undulation. As the process of manufacture becomes more familiar the type degenerates, and the ledges become less prominent, the undulations less accentuated, and the forms less shapely; until the later stages show a cylindrical jar surrounded merely by an incised line (*Nagada and Ballas*, p. 38). Was this class of pottery indigenous from the very first? or was it originally imported and subsequently developed by imitation?

The Wavy-handled, like the Black-topped pottery, is not confined to Egyptian soil. It is found on pre-Jewish sites in Syria of the date of about 1800 B.C. (Bliss, *Mound of Many Cities*, iii. 84, 87), and is there considered by Professor Petrie to belong to the Amorites, which suggests an origin for it among that eastern branch of the Berbers. It cannot be said to be really known outside Egypt and Syria, though there is one sporadic case of the occurrence of a late type of Wavy-handled jar on Italian soil.† Much of the pottery from prehistoric sites in North Italy preserved in the Bologna Museum shows a well-marked ledge handle, but without undulations; so that this cannot be considered to be identical with the Wavy-handled Egyptian ware.§ This class of pottery then seems to be indigenous either in Egypt or in Syria, perhaps in both. If preference must be given to one or other of the two it is probable that Syria has the better claim to have originated it; as the fine early types are found to be still flourishing there long after the time at which the Egyptians had wholly forgotten not only the originals but

* The only exception is in Cyprus, where haematitic Red ware, with analogous Black-topped varieties, is characteristic of the earlier Bronze Age; but is probably due to Egyptian influences:—see *Cyprus Museum Catalogue*, p. 17.

† Viz. on the site of Matera in Apulia, see *Monumenti Antichi*, vol. viii. ("Un villaggio Siculo presso Matera," Fig. 102).

§ On the other hand broken sherds from prehistoric graves in Bohemia (Prag Museum) might be thought to show a degraded wavy handle. But it is probably nothing more than a string-course like that found on early British pottery, and it would be dangerous to base any theory on its occurrence.

even the degraded derivations from them. In 1800 B.C. there were no Wavy-handled pots being made in Egypt which the Amorites could have imported; and were it maintained that the Amorite pottery of this date is a survival in the country of a type introduced from Egypt in "New Race" times, then the apparent preference for the rare older forms to the exclusion of the very common cylinder shapes would need to be explained.

The "Decorated" pottery was considered, when first found, to be an importation. But the discovery by Mr. F. W. Green at Hierakonpolis in 1899 of a "New Race" tomb painted all over with designs similar to those which occur on this ware tells against such a conclusion. The motives are not of a kind which need necessarily be considered to be foreign. The occurrence of ostriches proves nothing more than a familiarity with Africa; the boats may quite as well be river boats for the Nile as sea-going galleys (indeed the absence of sails makes it more probable); lastly, the so-called "mountain" motive is found also on the white-ornamented Red ware. Some of the decorations suggest an affinity with Berber patterns; but the constant occurrence of spirals, which are unknown in Kabyle work, renders derivation from this quarter improbable. On the whole it seems likely that the "Decorated" ware is of native origin in Egypt; but that the local artists employed a few of the patterns which they possessed in common with the Libyans, and which had become part of their general stock in trade.

The Black pottery with patterns incised in white is certainly imported, as was suggested when it was originally discovered (*Nagada and Ballas*, p. 38). Though found at various widely-separated points of the Mediterranean littoral its original source has not yet been identified. We greatly doubt the suggested connection with the Italian *bucchero nero*.

It is found then that of the seven classes of pottery used by the prehistoric Egyptians three are common to them and the Berbers of Algeria; one is common to them and the eastern Berbers (Amorites); two are of native origin; and one is imported from a certainly non-Berber source.

With regard to designs it has been pointed out how many of these are identical among the "New Race," and the Kabyles. Each of the two peoples may be said to possess a certain number which do not appear in the products of the other; but while the Kabyles have few that are quite distinctive and peculiar, there are many "New Race" motives which never appear in Kabyle work. Such are the

spiral (which, however, may be seen on Touâreg vessels of skin), the boats, the human figures, the animals, the standards, and the "aloes," all of which are of frequent occurrence upon the "Decorated" pottery.

To leave now the questions of pottery and of designs, it might have been thought safe to assert that the extraordinary skill which they display in the working of flint was peculiar to the "New Race" Egyptians. But the discovery of flint rings in graves in the Algerian Sahara, lately made by M. Jus, in the course of his engineering work,* shows that such an assertion would be erroneous. For the manufacture of flint rings and bangles marks almost the perfection of neolithic art; and the craftsmen who could successfully produce such can have been little if at all inferior to those who made the wonderful flint knives which are found in "New Race" graves in Egypt.

On the other hand it may be considered certain that the rare copper implements which the "New Race" imported from Cyprus, or the east, never reached Libya. Again, neither in North Africa or elsewhere do we know of anything to be compared to the fine stone vessels, the slates, and the ivory carvings which are amongst the most characteristic products of the prehistoric and proto-dynastic Egyptians.

The numerous coincidences, however, which have been shown to exist in the details of their arts and crafts, prove that very close commercial relations must have existed in prehistoric days between Egypt and her North African neighbours; which indeed might be naturally inferred from the mere circumstance of their geographical proximity.

But in this commerce which was the originator and which was the semi-passive recipient? or did each to some extent borrow from the other? A natural prejudice inclines the archaeologist to suppose that it was the Egyptians who possessed the superior skill, and who supplied their products to their less civilised neighbours without deriving much from the latter in return; but after all there is not sufficient evidence to justify any confident assertion upon the point. It is true that the Egyptians, even in these prehistoric days, were fairly advanced in civilisation; but that is not in itself a conclusive reason for supposing that they were greatly superior to the Libyans. For while we have direct knowledge of all that concerns the "New Race," we are obliged to infer what was the early condition of the Berbers from their position in much later times. And it does not necessarily follow because the Libyans at a later date were a comparatively barbarous people that they were equally inferior to the Egyptians at the first.

* See reference in Evans' *Further Discoveries of Cretan and Aegean Script*, p. 381.

Progress in civilisation is often fitful and intermittent, at one period rapid at another very slow. It may well be that when excavations are undertaken in the still untried regions of Algeria, Tunis, and Tripoli, the Libyans will be found to have possessed a culture far superior to any with which they have hitherto been credited ; or again that, when more has been learned of the earliest beginnings of Spain, archaeologists may come to regard the west no less than the east of the Mediterranean as the cradle of early civilisations.

So far, however, as present knowledge avails, it is natural to suppose that the Libyans derived more from the Egyptians than they gave to them in return ; and this view receives some countenance from a study of the prehieroglyphic script which Mr. Evans has discovered in Crete, and which he and Professor Petrie have identified with the marks on prehistoric Egyptian pots. A certain number of these signs have been shown to be identical with those found on the Libyan stelae and with the "Tifnagh" alphabet of the modern Touâregs ; but there seems to be a much closer affinity between the Egyptian and Cretan systems than there is between either of these and the ancient or modern Berber alphabet. It is as though the Berbers occupied a position somewhat distant from the main source of influence and picked up what they could at secondhand, some of the force and meaning of the original being lost in the process of transmission.

When all these various details are taken into consideration it may be permissible to conceive the early civilisation of the Mediterranean as originating from a centre which may be placed in or near Egypt ; or perhaps rather from two separate but not unconnected centres, one of which was in Egypt and the other at some point in the Aegean, which has not yet been determined.* From each of these there extended waves of influence of varying intensity, westwards as far as the Pillars of Hercules, eastwards as far as Syria and the nearer regions of Asia. The Berbers were naturally, from their geographical position, placed midway between the focus of activity and the western limits of its radiation. They received, therefore, much that originated in Egypt and the Aegean, and passed it on to their western neighbours ; while in return they acted as the intermediaries, who transmitted whatever knowledge or art had been independently evolved by the Iberians and their kinsmen who lived at the limits of the western world.

* Possibly Crete. This seems to be the trend of Mr. Evans' discoveries in that island.

